MULTICHANNEL AUDIO: SERVERS & STREAMERS FROM ARIA AND SHARP

stereophile

ONLINE AUTHORITY:
WWW.STEREOPHILE.COM

MARCH 2015

CHARLIE PARKER & MARK TURNER: OLD & NEW VOICES IN JAZZ

ASPIRATIONAL AUDIO:

- BOULDER'S 2110 PREAMPLIFIER
- LAMM'S LP2.1 PHONO PREAMP
- WILSON'S DUETTE SERIES 2 SPEAKER

ANALOG AUDIO:

- THE RETURN OF KISEKI PHONO CARTRIDGES
- PIONEER REINVENTS THE DJ DECK
- ULTRASONIC LP CLEANING

TIDAL'S LOSSLESS STREAMING REACHES THE US

HIGH QUALITY AND HIGH EFFICIENCY:

THETA'S PROMETHEUS MONOBLOCK

STEREOPHILE VOL.38 NO.3 MARCH 2015

BASE SERIES

ELEVATE YOUR MUSIC

FOR THE LOVER OF MUSIC & MOVIES.

TIMBRE - $147.00 - INVITE ACCURACY

PK10 BASE - $320.00 - BRING POWER

12VS - $344.80 - DELIVER TRUTH

KIMBER KABLE®

ph: 801-621-5530 · fax: 801-627-6980 · www.kimber.com

AS WE SEE IT

BY JASON VICTOR SERINUS

THIS ISSUE: it's a thorny question: what music should exhibitors at audio shows play?

To Play or Not to Play

To put it mildly, Jack Vad was dismayed. The Grammy Award–winning media producer and chief engineer for the San Francisco Symphony had just returned from the 2014 Rocky Mountain Audio Fest,[1] and was trying to make sense of his experiences there. When he'd carried his latest recordings, which I think are superbly recorded, into rooms at the show and asked if he could play them, exhibitors were anything but enthusiastic.

Vad, who at RMAF 2014 also appeared in an "Experts Ask the Experts" panel discussion, and presented formal demos of the same recordings in the Parasound and Sony rooms, had brought along a flash drive containing high-resolution tracks from SFS's new, Grammy-nominated *West Side Story* and *Masterpieces in Miniature* SACD/CDs, both conducted by Michael Tilson Thomas. The latter included a performance of Fauré's *Pavane* whose beauty nearly overwhelmed me in the room shared by VTL, Wilson Audio Specialties, dCS, and Transparent Audio.

"I wasn't asking to play cuts that were overly challenging, such as something by Anton Webern," Vad told me after the show. "I thought they were selections that would be entertaining, and I knew them really well. But in most cases, if there wasn't a technical snafu—there were some playback systems that couldn't grab the material—there basically wasn't one room I went into where people didn't want to get my music off the system."

What Vad found especially confusing was that his music never drove other show attendees out of rooms. In fact, at his formal demos, people were enthusiastic, and even applauded. "There was a sort of ubiquitous editorializing going on," he lamented. "It was almost as if there was an invisible hook, and a feeling that, somehow, there were so many problems that this material brought out, either in the components' integration or execution, that exhibitors didn't want to be heard. I'm assuming this, because it happened to me many times."

Exhibitors never declared that Vad's *West Side Story* tracks sounded poor. Instead, they stopped them midstream.

"It's not that I went in there undercover, pretending to be someone else," Vad continued. "My nametag clearly said I was connected with the San Francisco Symphony. By the end of the show, I began to wonder if I had to be a *Stereophile* reviewer to be treated decently."

Not really. I'll never forget the time John Atkinson and I visited the room of a certain loudspeaker manufacturer at T.H.E. Show Las Vegas. When I asked to hear a bit of a CD of Puccini's *Tosca* that the late Harry Pearson had considered a wonderful recording, the exhibitor waited a whole 90 seconds before exclaiming, "That's room-clearing music!"

Given his experiences, Vad asks an essential question. When an exhibitor discovers that a recording either won't bring out the strengths of the system being exhibited—or, worse, exposes its flaws—what should that exhibitor do?

At least one exhibitor has publicly addressed the issue of what sort of recordings to play, and how to play them. In "RMAF 2014: 3 Simple Rules for High-End Audio Show Attendees; Or, How to Avoid the Utter Humiliation of Being Thrown Out of a Hotel Room by Your Favorite Audio Icon," an essay published by the e-zine *The Audio Traveler*,[2] Marc Phillips, of Colleen Cardas Imports, decries attendees who request inappropriate volume levels, or ask to hear a bootleg recording of ear-splitting heavy metal through tiny minimonitors powered by low-powered single-ended-triode tube amps. "I won't do it," he proclaims. "Most room exhibitors will do it, and a few I know openly solicit the attendees for their musical choices because, as one person has told me, 'That's the best way to discover new music!' But some will not, and it's important to know why and to not hold it against them."

Phillips tells the tale of a reviewer who visited his room and asked to hear a track from his "special" trade-show mix CD. Unfortunately, his burn stank—every track sounded "thin and harsh and barely listenable." Others in the room began to wince and depart. Worse, another reviewer, this one from a "major publication," who had strolled in during the debacle, mentioned in his show report how bad the sound was.

Phillips's solution was to play only vinyl at RMAF 2014. Because few people bring along their own LPs to audio shows, he managed to control the music "without looking like a total asshole" and telling people to stuff it.

Both Vad and Phillips have valid concerns. Attendees with ears as finely tuned as Jack Vad's deserve to hear familiar recordings that will reveal components' strengths and flaws, especially recordings of acoustic classical music in which, for example, the differences between the reproduction of a timpani's fundamental low frequencies and its higher harmonics erodes the presentation. Exhibitors, in turn, want to play only tracks that will showcase their systems in the best possible light.

There must be a way to honor the needs of both. To make that possible, attendees should stop asking exhibitors to play poorly recorded or inappropriate tracks. It's equally important that exhibitors be up front about their ground rules, and politely explain what sort of recordings they are and are not willing to play. But it would also be great if they did everything in their power to arrive at shows with their equipment already broken in, and do their best to ensure proper setup in the limited time available. If every exhibitor and manufacturer had their act together, whenever someone like Jack Vad brought them superbly recorded, full-range music that can all too easily expose flaws, there would be few, if any, flaws to expose. ■

Jason Victor Serinus (STLetters@sorc.com is a professional whistler and the voice of Woodstock in the Emmy-nominated Peanuts cartoon She's a Good Skate, Charlie Brown.

1 See www.stereophile.com/category/rmaf-2014.

2 November 14, 2014. See www.theaudiotraveler.com/2014/11/14/rmaf-2014-3-simple-rules-for-high-end-audio-show-attendees/.

SILTECH

SAGA

Structural Analogue Gain Amplifier

"A MARVEL OF MODERN ENGINEERING."
Jonathan Valin,
The Absolute Sound, September 2013

"..IT MUST BE DOING SOMETHING MAGICAL TO MAKE EVERYTHING SOUND JUST GREAT."
Paul Miller,
Hifi News, June 2013

"AN INSTANT CLASSIC AND FUTURE COLLECTIBLE, THE SAGA IS THAT RAREST OF ALL HIGH-END PRODUCTS - SOMETHING GENUINELY NEW AND WONDERFUL-SOUNDING UNDER THE HI-FI SUN."
Jonathan Valin,
The Absolute Sound, January 2014

TECHNOLOGY BREAKTHROUGH

* C1 Control Amplifier and V1 Voltage Amplifier -Valves and battery power
* P1 Current Amplifier - Including the unique patent-pending Siltech LightDrive system, the SAGA P1 is the first audio component in the world to be light-power controlled.

www.siltechcables.com

Distributed in the USA by Audio Plus Services 800.663.9352 www.audioplusservices.com
Distributed in Canada by Plurison 866.271.5689 www.plurison.com

MARCH 2015

stereophile

Vol.38 No.3

p. 31

p. 59

p. 53

p. 64
p. 105
p. 115

p. 91

p. 77

FEATURES

53 **Gramophone Dreams**
Herb Reichert spends his leisure hours with Pioneer's PLX-1000 turntable.

59 **Mark Turner**
A new jazz voice on the tenor saxophone makes a rare solo album and it's worth the wait, says Robert Baird.

EQUIPMENT REPORTS

64 **Theta Digital Prometheus monoblock power amplifier**
by Larry Greenhill

77 **Boulder Amplifiers 2110 line preamplifier**
by Michael Fremer

91 **Wilson Audio Specialties Duette Series 2 loudspeaker**
by Art Dudley

105 **DALI Rubicon 8 loudspeaker**
by John Atkinson

FOLLOW-UPS

31 **Audiodesksysteme Gläss record-cleaning machine**
by Art Dudley

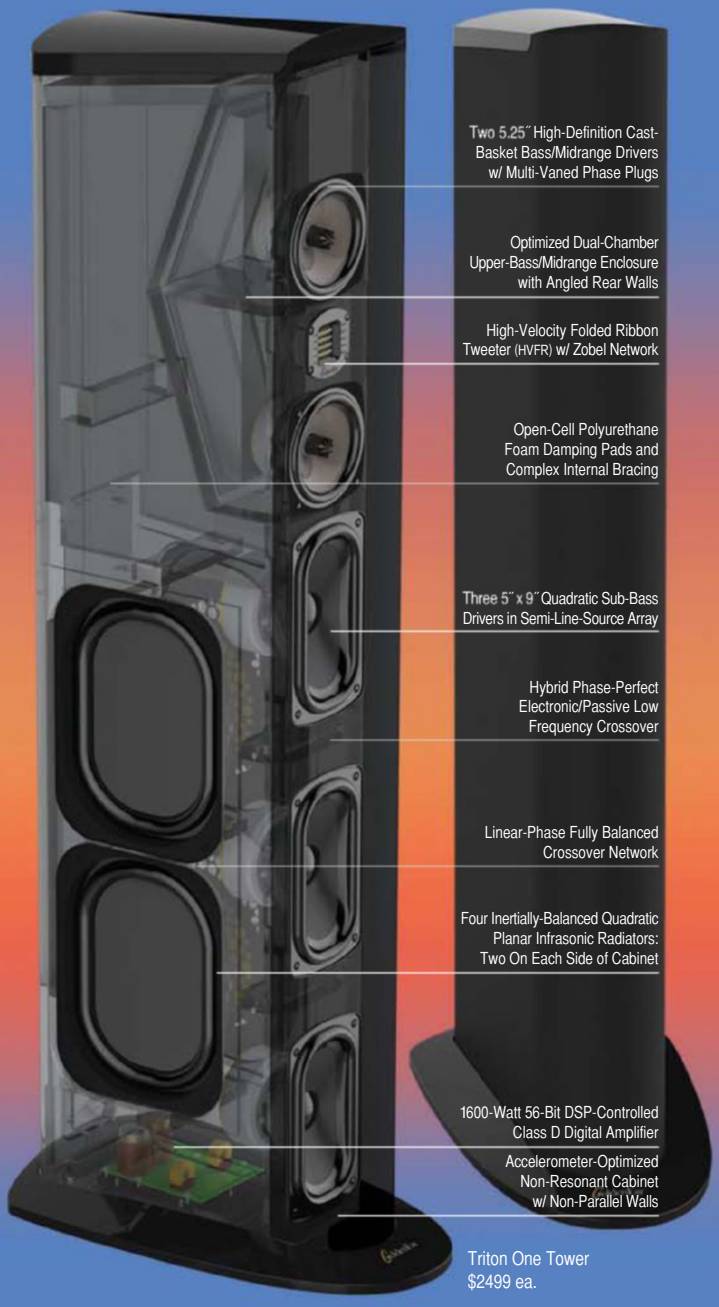
115 **PS Audio PerfectWave DirectStream D/A processor**
by John Atkinson

SEE OUR EXCLUSIVE EQUIPMENT REPORT ARCHIVE AT WWW.STEREOPHILE.COM

Stereophile (USPS #734-970 ISSN: 0585-2544) Vol.38 No.3, March 2015, Issue Number 422.
Copyright © 2015 by TEN: The Enthusiast Network Magazines, LLC. All rights reserved.
Published monthly by TEN: The Enthusiast Network, LLC., 261 Madison Ave., 6th Floor, New York, NY 10016-2303. Periodicals Postage paid at New York, NY and additional mailing offices. Subscription rates for one year (12 issues) U.S., APO, FPO, and U.S. Possessions $19.94, Canada $31.94, Foreign orders add $24 (including surface mail postage). Payment in advance, U.S. funds only. POSTMASTER: Send all UAA to CFS. (See DMM 707.4.12.5); NON-POSTAL AND MILITARY Facilities: send address corrections to Stereophile, P.O. Box 420235, Palm Coast, FL 32142-0235. Mailing Lists: From time to time we make our subscriber list available to companies that sell goods and services by mail that we believe would be of interest to our readers. If you would rather not receive such mailings, please send your current mailing label, or an exact copy, to: Stereophile, Mail Preference Service, P.O. Box 420235, Palm Coast, FL 32142-0235. Subscription Service: Should you wish to change your address, or order new subscriptions, you can do so by writing to the same address. Printed in the USA.

GoldenEar has Engineered Our New Triton One to Perform Like a $20,000+ Super Speaker!

"Triton One shames some speakers costing ten times as much … it is an absolute marvel" – Caleb Denison, *Digital Trends*



Triton One Tower
$2499 ea.

"Knocked me back in my seat … behaved as a point source that completely disappeared … should be a best-seller" – John Atkinson, *Stereophile*

"Best of CES 2014 … stunning realism … the sound was truly grand and majestic" – Roger Kanno, *SoundStage*

"Best High-End Value at CES 2014 … a speaker that defies its price point" – John Sciacca, *Residential Systems*

"Best Sound for the Money at CES 2014"
– Jonathan Valin, *The Absolute Sound*
– Kirk Midskog, *The Absolute Sound*
– Neil Gader, *The Absolute Sound*

When three of The Absolute Sound's top reviewers all choose the same product for their own "Best Sound for the Money" honors, you know it is something truly very special, epic and iconic. Introducing the Triton One, an evolutionary speaker that builds upon all the advanced technologies that have made the Tritons mega-hits around the world. This new top-of-the-line flagship was engineered to deliver even better dynamics and bass than the extraordinary Triton Two, along with further refinement of all aspects of sonic performance. How well have we succeeded? In the words of HD Living's Dennis Burger, the Triton One delivers, *"… the sort of upper-echelon performance that normally only comes from speakers whose price tags rival a good luxury automobile"*.

Triton One "creates visceral, tangible waves of pure audio bliss" – Dennis Burger, *HD Living*

Great sound is what it is all about and the Triton Ones deliver, as The Absolute Sound's Chris Martens raved, *"The Triton One offers excellent clarity, highly three-dimensional imaging, subwoofer-grade bass depth and clout plus fine levels of low-end pitch, definition and control"*. The Ones were specifically engineered to excel with all types of music as well as movies. Best of all, they offer previously unheard of value, as Brent Butterworth wrote in Sound & Vision, *"I heard a few people saying the Triton One sounded like some $20,000-and-up high-end towers, but I disagree: I think they sounded better than most of them"*. Darryl Wilkinson summed them up best, *"A Masterpiece … GoldenEar has fully ushered in the Golden Age of the Loudspeaker"*. Hear them for yourself and discover what all the excitement is about.

GoldenEar Technology®
A Passion for Sonic Perfection®

www.goldenear.com
PO Box 141, Stevenson, MD 21153 (410) 998-9134

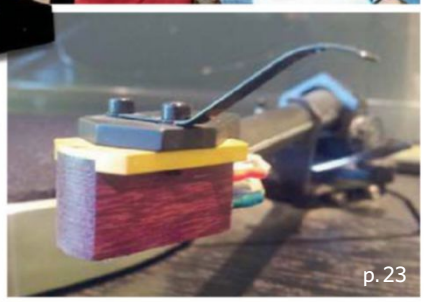
Like us on Facebook! facebook.com/goldenear
Follow us on Twitter! twitter.com/goldeneartech

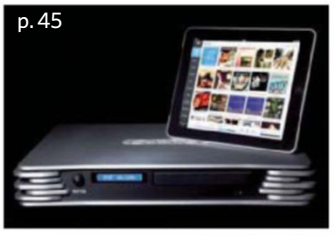
MARCH 2015
stereophile
Vol.38 No.3

p. 23

p. 39

p. 15


p. 23


p. 45

p. 45

p. 121

COLUMNS

3 As We See It
Jason Victor Serinus discusses what music is best for exhibitors to play at audio shows.

11 Letters
Readers comment on Steve Guttenberg's admission that he prefers listening to records to concert-going and or Herb Reichert's recent review of Sjöfn's (the clue) speaker.
Get on your Soapbox! Visit the forums at www.stereophile.com.

15 Industry Update
High-end audio news, including the shows and dealer-sponsored events taking place in February and March 2015, plus *Stereophile*'s new "Recommended Components Collector's Edition," the launch of Meridian's MQA format, Rega's new Apheta phono cartridge, and the departure of two of this magazine's senior editors.
Want to know more? Go to the "News Desk" at www.stereophile.com for up-to-the-minute info.

23 Analog Corner
Michael Fremer offers his impressions of Kiseki's Purpleheart N.S. MC phono cartridge and Lamm's LP 2.1 phono preamplifier.

31 Listening
Art Dudley puts the Audiodesksysteme Gläss Vinyl Cleaner through its paces.

39 Audio Streams
Michael Lavorgna explores the listening experience and gets lost in Tidal's lossless streaming service.

45 Music in the Round
Kalman Rubinson auditions DigiBit's Aria music server and Sharp's SD-WH1000U wireless high-resolution audio player.

119 Record Reviews
Our "Recording of the Month" for March is a survey of Brazilian music, *Amar En Paz* by singer Estrella Morente. In Rock/Pop we have new recordings by Will Butler, Duke Garwood and another installment in the *Dave's Picks* series of live Grateful Dead recordings. Also featured is the second volume of restored Paramount Recordings from Jack White's Third Man label. In Jazz, there's another live recording, this time on ECM from Keith Jarrett's Trio in Hamburg in 1972.

124 Manufacturers' Comments
Ultra Systems/Audiodesksysteme, DigiBit, Pioneer, Boulder, and PS Audio comment on our reviews of their products.

130 Aural Robert
So you want to buy Charlie Parker's immortal *Dial Sessions* again? No, not really. But then again these might actually have the best sound yet. Robert Baird listens and reports.

INFORMATION

p. 119

128 Audio Mart
126 Manufacturers' Showcase
127 Dealers' Showcase
127 Advertiser Index

Follow Stereophile on Facebook:
www.facebook.com/stereophilemag.

"extraordinarily powerful... uncolored... natural"

- John Atkinson, Stereophile

The JosephAudio Pulsar
15" High, 8 1/2" Wide.
Spectacularly Deep.
Get the full story at
www.josephaudio.com

"Devastatingly right"
"The Pulsars are veritable light-sabers"
- Steven Stone, The Absolute Sound
"For those of you who have dreamed of owning relatively compact stand mount monitors that really do convey the sense of reproducing (near) full-range bass, your loudspeaker has arrived!"
- Chris Martens, The Absolute Sound

JosephAudio

Effortless Musicality
Exclusive Technology
(800) 474- HIFI (4434)

stereophile

MARCH 2015

EDITOR JOHN ATKINSON
MUSIC EDITOR ROBERT BAIRD
SENIOR CONTRIBUTING EDITORS
MARTIN COLLOMS, MICHAEL FREMER, MICHAEL LAVORGNA, JOHN MARKS, KALMAN RUBINSON
EDITOR AT LARGE ART DUDLEY
WEB PRODUCER JON IVERSON

FOUNDER J. GORDON HOLT
COVER PHOTO ERIC SWANSON

ART DIRECTOR JEREMY MOYLER

MANAGING EDITOR RUSTY KURTZ

CONTRIBUTING EDITORS (AUDIO)
JIM AUSTIN, LONNIE BROWNELL, BRIAN DAMKROGER, ROBERT DEUTSCH, SHANNON DICKSON, LARRY GREENHILL, JON IVERSON, FRED KAPLAN, DAVID LANDER, ERICK LICHTE, PAUL MESSENGER, HERB REICHERT, ROBERT J. REINA, MARKUS SAUER, JASON VICTOR SERINUS

CONTRIBUTING EDITORS (MUSIC)
DAVID ADLER, LARRY BIRNBAUM, DANIEL BUCKLEY, THOMAS CONRAD, RICHARD LEHNERT, ROBERT LEVINE, FRED MILLS, LELAND RUCKER, DAVID SOKOL, JOHN SWENSON

ADVERTISING
GENERAL MANAGER KEITH PRAY
(212) 915-4157, KPRAY@ENTHUSIASTNETWORK.COM
ADVERTISING MANAGER ED DIBENEDETTO (212) 915-4153, EDIBENEDETTO@ENTHUSIASTNETWORK.COM
ADVERTISING MANAGER LAURA J. LOVECCHIO, LOVECCHIO ASSOCIATES, CENTRAL & WEST COAST, NATIONAL RETAILERS, CLASSIFIEDS (718) 745-5025, LAURA_LOVECCHIO@SBCGLOBAL.NET
SALES COORDINATOR ROSEMARIE TORCIVIA
(212) 915-4160, RTORCIVIA@ENTHUSIASTNETWORK.COM
DIGITAL INQUIRIES KEITH PRAY, KPRAY@ENTHUSIASTNETWORK.COM
MUSIC MANAGER ILKO NECHEV
(212) 490-2079, ILKO@MITCHELLADGROUP.COM

MANUFACTURING & PRODUCTION OPERATIONS
VP, MANUFACTURING & AD OPERATIONS GREG PARNELL
SENIOR DIRECTOR, AD OPERATIONS PAULINE ATWOOD
PRODUCTION MANAGER CHRISTINA PONCÉ
ARCHIVIST THOMAS VOEHRINGER

ENTERTAINMENT GROUP
MANAGEMENT
PRODUCTION DIRECTOR KASEY KELLEY
EDITORIAL DIRECTOR, DIGITAL CHRIS MAURO
FINANCE DIRECTOR ADAM MINER

DIGITAL GROUP
DIGITAL DIRECTOR, ENGINEERING JEFF KIMMEL
SENIOR PRODUCT MANAGER RISHI KUMAR
SENIOR PRODUCT MANAGER MARC BARTELL
CREATIVE DIRECTOR PETER TRACY

TEN THE ENTHUSIAST NETWORK

PRINTED IN THE USA.
COPYRIGHT © 2015 BY TEN: THE ENTHUSIAST NETWORK MAGAZINES, LLC. ALL RIGHTS RESERVED.

Alliance for Audited Media

Please Recycle This Magazine

TEN: THE ENTHUSIAST NETWORK, LLC
CHAIRMAN PETER ENGLEHART
CHIEF EXECUTIVE OFFICER SCOTT P. DICKEY
EVP, CHIEF FINANCIAL OFFICER BILL SUTMAN
EVP, CHIEF CREATIVE OFFICER ALAN ALPANIAN
EVP, SPORTS & ENTERTAINMENT NORB GARRETT
EVP, CHIEF CONTENT OFFICER ANGUS MACKENZIE
EVP, OPERATIONS KEVIN MULLAN
SVP, ENTERPRISES TYLER SCHULZE
EVP, SALES & MARKETING ERIC SCHWAB
SVP, DIGITAL OPERATIONS DAN BEDNAR
VP, SALES OPERATIONS MATT BOICE
SVP, FINANCIAL PLANNING MIKE CUMMINGS
SVP, AUTOMOTIVE DIGITAL GEOFF DEFRANCE
VP, EDITORIAL OPERATIONS AMY DIAMOND
EVP, AFTERMARKET AUTOMOTIVE DOUG EVANS
SVP, CONTENT STRATEGY, AUTOMOTIVE DAVID FREIBURGER
SVP, DIGITAL, SPORTS & ENTERTAINMENT GREG MORROW
VP, DIGITAL MONETIZATION ELISABETH MURRAY
SVP, MARKETING RYAN PAYNE
EVP, MIND OVER EYE BILL WADSWORTH

CONSUMER MARKETING, ENTHUSIAST MEDIA SUBSCRIPTION COMPANY, INC.
SVP, CIRCULATION TOM SLATER
VP, RETENTION & OPERATIONS FULFILLMENT DONALD T. ROBINSON III

IMPORTANT STEREOPHILE TELEPHONE NUMBERS
US & CANADA SUBSCRIPTIONS (800) 666-3746, Stereophile@emailcustomerservice.com
Stereophile, Box 420235, Palm Coast, FL 32142-0235
Please include name, address, and phone number on any inquiries
INTERNATIONAL SUBSCRIPTIONS (386) 447-6383
EDITORIAL Tel: (212) 915-4156, Fax: (212) 915-4167
JOHN ATKINSON jatkinson@enthusiastnetwork.com
ROBERT BAIRD rbaird@enthusiastnetwork.com
BACK ISSUES, LPS, CDS (888) 237-0955
STEREOPHILE WEBSITE www.stereophile.com

REPRINTS
Contact Wright's Media at (877) 652-5295 (or (281) 419-5725 outside the US and Canada) to purchase quality custom reprints or e-prints of articles appearing in this publication.

SUBMISSIONS
Any submissions or contributions from readers shall be subject to and governed by TEN: The Enthusiast Network's User Content Submission Terms and Conditions, which are posted at http://www.enthusiastnetwork.com/submissions/

BACK ISSUES
To order back issues, visit https://www.circsource.com/store/storeBackIssues.html

CANADA POST
Return undeliverable Canadian addresses to: IMEX Global Solutions, P.O. Box 25542, London, ON N6C 6B2

SUBSCRIBER LIST
Occasionally our subscriber list is made available to reputable firms offering goods and services we believe would be of interest to our readers. If you prefer to be excluded, please send your current address label and a note requesting to be excluded from these promotions to TEN: The Enthusiast Network, LLC, 831 S. Douglas St., El Segundo, CA 90245, Attn: Privacy Coordinator.

JERRY RASKIN'S
NEEDLEDOCTOR
Established 1979

WWW.NEEDLEDOCTOR.COM

...TRANSPARENT, CONVINCING, AND ACCURATE.

ORTOFON 2M RED PHONO CARTRIDGE

ONLY $100.00

"The **ORTOFON 2M RED** raises the bar for budget cartridge performance. You won't find a cartridge in the range that pulls more detail from the groove. Sonically, the 2M Red is transparent, convincing, and accurate."

ortofon 2M

ORTOFON 2M SERIES PHONO CARTRIDGES

ORTOFON 2M BLUE PHONO CARTRIDGE	ORTOFON 2M BRONZE PHONO CARTRIDGE	ORTOFON 2M BLACK PHONO CARTRIDGE	ORTOFON 2M 78 PHONO CARTRIDGE	ORTOFON 2M MONO PHONO CARTRIDGE
$236	$440	$755	$125	$356

ND

Toll Free 800.229.0644 | **Phone** 612.378.0543 | **Fax** 612.378.9024
Email info@NeedleDoctor.com | 6006 Excelsior Blvd., St. Louis Park, MN 55416

WORLD'S LARGEST SELECTION
OF TURNTABLES, CARTRIDGES, AND NEEDLES!

So Much Power

You'd Think It's a Descendent of Zeus

Power so prodigious that we can measure it in horsepower! The revolutionary SAE 2HP amplifier is capable of **over 746 watts or 1 horsepower per fully differential "push / pull" channel @ 1kHz** in it's 5RU chassis (rack-mounted or free standing).

The world-renowned engineers at SAE achieved an **industry leading >128dB of signal to noise ratio** for one simple reason...at SAE we want you to hear your recordings...not the amplifier.

The fully balanced, Class A/B SAE 2HP amplifier masterpiece is designed, engineered, and manufactured in America.

Audition the astonishing SAE 2HP ... the new ultra-high performance, exceptionally clean 2 channel audiophile power amplifier at your nearest SAE dealer.

The Stereo Amplifier - SAE 2HP (2 Horsepower)

Power Output	Capable of Over 746W RMS (1 Horsepower) @ 1kHz x 2 Fully Differential Channels @ 8 Ohms 600W RMS from 20Hz to 20kHz x 2 Fully Differential Channels @ 8 Ohms @ 0.01% THD & IMD
Signal to Noise Ratio "A-Weighted"	>128dB

SAE
SCIENTIFIC AUDIO ELECTRONICS

www.hear-sae.com

LETTERS FEEDBACK TO THE EDITOR

TAKE HEED! Unless marked otherwise, all letters to the magazine and its writers are assumed to be for possible publication. In the spirit of vigorous debate implied by the First Amendment, and unless we are requested not to, we publish correspondents' e-mail addresses.

Swords into plowshares (part 634)

Editor:

A little DIY audio from the heartland (be sure the primer has been fired before proceeding): http://tinyurl.com/nmdatkh.

—*Robert Mason*
Woodside, NY
bobmason666@gmail.com

Home alone?

Editor:

I understand the message in Steve Guttenberg's "As We See It" in January 2015 (p.3), but I want to share an alternative view. I regularly go to the Seattle Symphony Orchestra's concerts. The SSO has a new, state-of-the-art venue, Benaroya Hall, and the acoustics are to die for. I sit in the center about 7 to 12 rows back. The average ticket price is around $45. Last year they performed Saint-Saëns's Symphony 3. The sound was audio nirvana, the building trembling with deep, luscious bass energy (not the rock'n'roll quality, but something else that I cannot describe) from the organ and unbelievable sonic detail from the entire orchestra. No home listening experience can ever come close. Having said that, I have been to many live concerts with lousy acoustics and venues, and poor musicianship, for which staying at home would have been a better option.

For me, recorded music will never come close to the "perfect" live performance.

—*Andrew Layton*
andrewlayton7@gmail.com

Peace and quiet

Editor:

I just read Steve Guttenberg's article, "Home Alone," in January, about his preferring to listen to music in the comfort of his own home, and I am with him 100%. Same goes for movies. The last movie I went to, girls were texting on their cellphones all the way through it on my right and left, their screens lighting up the theater.

And then there's the inability to grab the beverage of your choice, or a snack. And everyone there experiences the event differently: some loudly, some uninterested, as Steve said. That's why I invested megabucks in my stereo and television. There's nothing quite like experiencing the studio version in uninterrupted peace and quiet.

—*Craig Rupert*
crupert1@verizon.net

Oy vey

Editor:

Steve Guttenberg is not alone in his preference. After over 50 years of intensive involvement on one side of the music fence or another, I have come to believe, both personally and professionally, that "live" and recorded are two different things that run in parallel, occasionally but rarely intersecting, and offering differing sets of rewards. I am sure that the real value of a concert is sensing the intensity of mental, physical, and emotional energy coming off performers who are in the same room. Years of tawdry "Live *vs* Recorded" trials only make me say, "Oy vey."

—*Craig Allison*
craig@lavishhifi.com

Refreshing

Editor:

Herbert Reichert's review of the Sjöfn HiFi (the clue) loudspeaker (January 2015, p.93) is perhaps my favorite article ever written by an audio reviewer. Finally, someone says what I have experienced on more than one occasion. You listen to a piece of gear (typically speakers) and are blown away, purchase a pair, get home, set them up with excited anticipation, only to be utterly disappointed. This certainly must have to do with ancillary equipment and room or whatever, which Herbert made abundantly clear, even adding that he was "annoyed with my inability to get The Clues to sing." Such a refreshing review—it didn't just gush about the piece of gear, as so many do.

I found the responses from the manufacturer and designer almost laughable. Yes, Herb said great things about (the clue)s when they were set up elsewhere. Others said very positive things, too, and maybe he could have got them to sound a little better in his own listening environment with a few of their suggestions. But I don't think that was the point. He certainly didn't bash the speakers, he just stated his findings—perfect! I will certainly be renewing my subscription.

—*Michael Worsa*
m.worsa@gmail.com

LETTERS TO THE EDITOR should be sent as faxes or e-mails only. Fax: (212) 915-4167. E-mail: STletters@sorc.com. Please note: We are unable to answer requests for information about specific products or systems. If you have problems with your subscription, call (800) 666-3746, or e-mail Stereophile@palmcoastd.com, or write to *Stereophile*, P.O. Box 420235, Palm Coast, FL 32142-0235.

Play them again, Herb

Editor:

I appreciate Herb Reichert's exhaustive efforts to get Sjöfn's (the clue) speakers to sing as sweetly for his January 2015 review as he had heard them play at last summer's Capital Audiofest.

But I'd suggest that Mr. Reichert—or some other staff member—might revisit (the clue), perhaps with some setup advice from Sjöfn's Lars Erickson, as *Stereophile* has occasionally done when company techs assisted reviewers in setting up their megabuck speakers. Lars's suggestions helped me achieve excellent performance from (the clue)s in a particularly difficult, 12' by 12' listening room.

Perhaps a revisit won't change Mr. Reichert's initial conclusions, but the effort would surely be valuable for many audiophiles on a budget who still wonder if (the clue)s might be those $1000/pair speakers that can bring them that "You are there!" listening experience.

—*George Van Dyke*
gvandyke2@pa.metrocast.net

No more evil laughs

Editor:

Every time I open a new *Stereophile* without a Sam Tellig article, I am frightened that he might have stopped writing because of health problems. I cannot imagine another reason for Sam not telling us hi-fi stories, laughing his evil laughs. Without Sam's contributions, *Stereophile* would no longer be my *Stereophile*.

—*Dr. Reinhold Martin*
Poing, Germany
reinhold_martin@t-online.de

Sadly, Sam Tellig has resigned; his December 2014 column was his last. See "Industry Update" (p.19).—**John Atkinson**

Vinyl Lives Here

ACOUSTIC SOUNDS INC.

We're Music Lovers

Don't Miss Out On The Best Sounding Vinyl!

Titles below also available on SACD

The CCR Box Set
Creedence Clearwater Revival
Absolute Originals

Stevie Ray Vaughan
Texas Hurricane - Box Set

Nat "King" Cole
The Nat "King" Cole Story

The Doors
Infinite - Box Set

Norah Jones
The Vinyl Collection - Box Set

Tony Bennett
At Carnegie Hall

Peter, Paul & Mary
In Concert

Harry Belafonte
At Carnegie Hall

Julie London
Julie Is Her Name, Vol. 2

Julie London
Latin In A Satin Mood

Dave Brubeck
Time Out

Duke Ellington
Masterpieces By Ellington

Cat Stevens
Tea For The Tillerman

Shelby Lynne
Just A Little Lovin'

Vince Guaraldi Trio
A Charlie Brown Christmas

The Beach Boys
Surfer Girl

The Beach Boys
Pet Sounds

Sonny Rollins
Tenor Madness

Miles Davis
Relaxin'

John Coltrane
Soultrane

The World's Largest Selection Of Audiophile Recordings

ACOUSTICSOUNDS.COM | SUPERHIREZ.COM | 800.716.3553

Vinyl Lives Here

ACOUSTIC SOUNDS INC.

We're Music Lovers

RECOMMENDED TURNTABLES

Kuzma Stabi S
with Motor Controller

VPI Classic Signature
with JMW 10.5i SE Tonearm
(Optional equipment available.)
Call for details!

SME Model 20/3

RECOMMENDED PREAMPLIFIERS

Rogue Audio Ares Phono Preamp
with Outboard Power Supply

Pass Labs XP 25 Twin Chassis
Phonostage Preamp

Herron Audio Phono Preamp
VTPH-2 MM/MC Tube

RECOMMENDED CARTRIDGES

Koetsu Cartridges

Urushi Red Vermillion

Onyx Platinum

Kiseki Cartridges

Blue

Purple Heart

EMT Cartridges

JSD6 Gold Super Fineline

JSD6 Super Fineline

The World's Largest Selection Of Audiophile Recordings

ACOUSTICSOUNDS.COM | SUPERHIREZ.COM | 800.716.3553

PASS

"Moderation is a fatal thing... Nothing succeeds like excess."

Oscar Wilde

Xs 300: Dual chassis monoblock
Xs 150: Dual chassis monoblock
Xs Preamp: Dual chassis preamp
Xs Phono: Dual chassis phonopreamp

Pass Laboratories, 13395 New Airport Rd. Suite G, Auburn, CA 95602

INDUSTRY UPDATE

AUDIO NEWS & VIEWS

SUBMISSIONS: Those promoting audio-related seminars, shows, and meetings should e-mail the when, where, and who to JAtkinson@enthusiastnetwork.com at least eight weeks before the month of the event. The deadline for the April 2015 issue is January 20, 2015.

12 YEARS OF "RECOMMENDED COMPONENTS"

John Atkinson

"Recommended Components" has been *Stereophile*'s most popular feature since its first appearance, in the fifth issue of the magazine. Fifty-two years later, we've put together a special issue: *Stereophile Recommended Components Collector's Edition*. While the regular "Recommended Components" listings in our April and October issues concentrate on products that have been reviewed in the previous three years, this special 180-page issue features capsule reviews of every audio component that has been reviewed and recommended by *Stereophile*'s team of writers and editors in the 12 years of listings since 2003: more than 400 loudspeakers and subwoofers; more than 400 amplifiers and preamplifiers; almost 300 digital disc and file players and digital processors; 200 turntables, tonearms, and phono cartridges; and all manner of headphones, cables, room acoustic treatments, and accessories.

In the special issue, almost 1500 products are described, categorized, and recommended in our regular Classes, A+ through E. Following each product's name is the retail price that was current the last time that product appeared in "Recommended Components," the issue of the magazine in which our original review appeared, and the period during which it was listed (*eg*, "October 2003–April 2010"). In addition, *Stereophile*'s Editor-at-Large, Art Dudley, has written guides on how to choose products in each category, as well as how to find a specialty audio retailer, while Robert Deutsch contributes an essay on Affordable Audio: "High-quality sound-reproduction equipment isn't just for those with big bucks," he writes, and explains how to assemble a high-performance but high-value system.

While the key to putting together a satisfying system is to listen for yourself, our special issue is the essential companion for those selecting new and used high-end audio components. *Stereophile Recommended Components Collector's Edition* costs $7.99 and can be found at your regular newsstand and bookstore now.

UK: THE SHARD, LONDON

Paul Messenger

At the beginning of December 2014 Meridian's Bob Stuart presented the most interesting and, possibly, most important UK press conference pertaining to high-end audio in many years. Its subject was Master Quality Authenticated (MQA), a technology that Meridian has developed over a number of years, building on knowledge gained through the company's development of Meridian Lossless Packing (MLP), and based on additional findings in psychoacoustics and neuroscience achieved with the help of magnetic resonance imaging (MRI).

MQA is intended for use in the archiving and transmission of music data files, and there's good evidence that it could mark the point at which digital audio finally comes of age. Attendance at the event was excellent, though that might have had less to do with Bob Stuart and MQA than with the venue: the viewing platform on the 69th floor of The Shard, London's iconic new skyscraper.

Stuart began by pointing out that our hearing evolved as a survival

CALENDAR OF INDUSTRY EVENTS

ATTENTION ALL AUDIO SOCIETIES: We have a page on the *Stereophile* website dedicated to you: www.stereophile.com/audiophile-societies. If you'd like to have your audio-society information posted on the site, e-mail Chris Vogel at info@XLinkAudio.com.

Please note that it is inappropriate for a retailer to promote a new product line in "Calendar" unless this is associated with a seminar or similar event.

ARIZONA

■ Wednesday, February 25, 7pm: The ***Arizona Audio-Video Club*** will hold its monthly meeting at the Marriott Airport Hotel (1101 N. 44th Street, Phoenix). The meeting will feature demonstrations of **Unison Research** vacuum-tube electronics and **Axis** VoiceBox S speakers by Colleen Cardas and Marc Phillips, of Colleen Cardas Imports. Guests are welcome and refreshments will be served. For more info, visit www.azavclub.org, or contact Adam Goldfine at goldfineam@aol.com or (602) 524-3974.

CALIFORNIA

■ Sunday, February 22, 2–5pm: The ***Los Angeles & Orange County Audio Society*** will hold its monthly meeting at **Scott Walker Audio**, in Anaheim (1215 N. Tustin Avenue). The demonstration will feature the complete line of **GoldenEar Technology** speakers, **Rogue Audio** and **Simaudio Moon** electronics, plus affordable, all-new UEF cables and accessories from **Synergistic Research**. Complete systems on demonstration will range from $2000 to $15,000, representing the best of high-value, affordable systems. Representatives of the manufacturers will be on hand to showcase their products. **Eastwind Import** will bring imported LPs and CDs for our shopping experience.

mechanism, primarily to detect impulse-type sounds and where they're coming from. Stuart, his collaborator Peter Craven, and others have found that the critical factor in human hearing is not a sound's frequency content but the timing of transients and that this is far more important than any theoretical interrelationship between time and frequency. The MQA approach, therefore, primarily focuses on a complete signal chain that both encodes precisely when each transient occurs and doesn't obscure that timing information with the pre- and post-ringing that results from classic digital filtering techniques. MQA avoids all such filtering, Bob Stuart claiming that the impulse response of the entire A/D and D/a chain is just 50µs with a leading edge uncertainty of an incredible 4µs. According to John Atkinson, MQA uses a variant of Meridian's "apodizing filter" in the mastering of digital recordings that can be fine-tuned to the actual A/D converter originally used. According to Bob Stuart in conversation with JA, this is possible because 1) there is only a small population of professional A/D converters and 2) record companies

Meridian's Bob Stuart explains how MQA reduces file size while preserving resolution.

PHOTO: MERIDIAN

A raffle is planned and lunch will be served. Guests, visitors, and new members are invited. Parking is free. For more info, visit www.laocas.com or call Bob Levi at (714) 281-5850.

■ Sunday, March 22, 2–5pm: The ***Los Angeles & Orange County Audio Society*** will hold its monthly meeting at **Upscale Audio**, in Upland (2504 Spring Terrace, 909-931-9686). The new, powerful **PrimaLuna** DiaLogue Premium HP integrated amplifier, preamplifier, and amplifier will be auditioned for the Society. The wondrous **Kiseki** Purpleheart N.S. cartridge will be used in the analog system. Kevin Deal, President of Upscale Audio and Vice President of the Society, will host the event, and continuous tours of his world-renowned vacuum-tube stock and display will be conducted. New offerings from Kiseki and PrimaLuna will be announced. A special industry guest appearance is in the works. **Eastwind Import** will provide new, imported LPs and CDs for our shopping fun. A raffle is planned and a terrific lunch will be served. Visitors and new members are welcome. Parking is free. For more info, visit www.laocas.com or call Bob Levi at (714) 281-5850.

■ Saturday, April 11, 2–5pm: The ***Los Angeles & Orange County Audio Society*** will hold its monthly meeting at **Evolution Audio & Video**, in Agoura Hills (5341 Derry Avenue, Suite S). Bill McKiegan of **Krell Industries**

CLEARAUDIO Concept Turntable
$1,599

MUSIC HALL Ikura Turntable
$1,195

AVID Acutus Reference SP Turntable
$26,995

VPI Classic 3 Rosewood
$6,500

REGA RP10 Turntable
$5,495

PRO-JECT Xtension 10 Turntable
$3,250

AXPONA
CHICAGO'S OWN HIGH-END AUDIO SHOW
APRIL 24 - 26, 2015 WESTIN O'HARE • CHICAGO, IL

actually keep good records on what converter was used for the original sessions and/or mastering. Almost all CDs from the early 1980s, for example, were mastered with one of the Sony PCM1600 family.

But there's more to MQA than this. Bob Stuart described what he called this an "origami" approach to pack the information above the audio band in high–sample-rate recordings beneath its noise floor.[1] Played on a conventional DAC, the MQA-encoded file will playback as a conventional "Red Book" recording, but if the DAC includes MQA decoding will unfold to give, in theory, a sound identical to that of the original high-rez recording.

As well as the potential improvement in sound quality, an MQA-mastered recording will occupy a much smaller space on a hard drive but more importantly, requires significantly lower bandwidth for streaming. An MQA-encoded high-rez file requires fairly modest data rates, typically about 1.5Mbps per channel for a stereo recording, slightly more than that required for uncompressed CD audio and much lower than the original 24-bit/192kHz file's rate of 4.6Mbps—downloading from and even streaming over the Internet such a high-resolution file will be entirely possible. Stuart played us three tracks from different eras, including "Don't Think Twice, It's Alright," from *The Freewheelin' Bob Dylan* (Columbia, 1962), which sounded quite wonderful, and alone made a very good case for MQA preserving the sound quality of the original high-resolution transfer from analog.

The arrival of MQA is likely to have

1 See www.stereophile.com/content/ive-heard-future-streaming-meridians-mqa, where John Atkinson describes how this done using illustrations from Bob Stuart's presentation.

will demonstrate Krell's latest in high-performance audio and video equipment, including their spectacular Vanguard integrated amplifier. Other industry representatives will be on hand for demonstrations and Q&A. **Eastwind Import** will be there to offer LPs and CDs for sale. A raffle is planned and lunch will be served. Guests, visitors, and new members are invited. Parking is free. For more info, visit www.laocas.com or call Bob Levi at (714) 281-5850.

GEORGIA

■ Sunday, February 15, 2–5pm: The ***Audio Video Club of Atlanta*** will host a program featuring Sunny Umrao, of **Scaena Loudspeakers** ISO-Linear Array Tower loudspeakers and subwoofers. This will include demonstrations and discussions of Scaena's Speaker Maximizer and fully digital active bass-management system using 32-bit SHARC digital signal processors. Mr. Umrao will also showcase Scaena's all-format Mainframe Digital Music Server, built to business-enterprise standards. Location: Virtual Properties, 2750 Premiere Parkway, Duluth. Guests welcome; refreshments provided. For information, contact John Morrison, President, at (770) 330-3919 or jhm3@bellsouth.net; or Chuck Bruce, VP, at (770) 550-1434. For additional details, consult the club's website: www.a-vcoa.org.

■ Sunday, March 22, 2–5pm: The

major repercussions throughout the High End. It seems likely to promote hi-rez streaming while probably reducing interest in hi-rez downloads, and might affect the vinyl revival too. However, either or both possibilities will depend on the cooperation of the major record labels. A representative of Warner Music Group attended the conference, and expressed considerable enthusiasm for MQA, though of course the participation of Sony and UMG will also be necessary.[2]

I understand that it usually costs around $3000 to remaster a recording, which doesn't sound too excessive. I daresay the prospects of large numbers of MQA-encoded reissues becoming available are pretty good, especially for classic albums. The decoding side seems reasonably straightforward: essentially software-based, it will be made available as an app or built into hardware. (The first MQA-capable decoder to be made available was the Mk.2 version of Meridian's Explorer and a firmware upgrade for the Meridian Prime that JA reviewed in October will allow MQA playback.)

Those interested in further details should note that much of the background to MQA was spelled out in "A Hierarchical Approach to Archiving and Distribution," a paper presented by Stuart and Craven at the 2014 Convention of the Audio Engineering Society.[3]

UK: WEMBLEY, MIDDLESEX

Paul Messenger

Musical Fidelity's new Merlin 1 system looks likely to attract a youth market that has so far shown little interest in hi-fi. The fact that it costs only $1800 for a digital streaming system complete with Round Table turntable and tonearm ($999 without the Round Table) has got to be a plus from a sales point of view, though we'll have to await an audition to determine to what extent the Merlin 1 deserves to be called "high-end."

Musical Fidelity's new Merlin system offers plug'n'play set-up at an affordable price.

The heart of the Merlin 1 is its digital stereo amplifier. It has a power output of 50Wpc, and each channel's amplifier section is fed separately via a 24-bit/192kHz DAC chip. Integrated into the Merlin 1 are a dedicated headphone amplifier and an analog-to-digital converter that can assist in ripping sources, such as LPs, to a computer hard drive. Inputs include phono, USB-B, and line (optical digital or analog), plus Bluetooth aptX.

The Round Table is a simple but attractive turntable, its center of gravity coinciding with its main bearing to give LPs a stable platform. The Merlin 1 speakers have a sculpted oval baffle and use a single BMR drive-unit run

2 MQA offers two benefits for the record industry: 1) A single file will offer non-audiophiles CD-quality sound quality. There is an analogy here with the LP record, a single inventory that can be played on mass-market players, yet responds with increased quality for those who invest in better players, and 2) the record company will no longer be selling a duplicate of its master, with all the implications for piracy that that implies, but something that might well *sound* identical to the master but doesn't allow the master to be recreated. In other words, it is like DRM but without all the restrictions on use that traditional DRM involves.—**John Atkinson**

3 Available for purchase at www.aes.org/e-lib/browse.cfm?elib=1750.

Audio Video Club of Atlanta is jointly hosting a showcase of **EgglestonWorks** loudspeakers, including the Andra III and Nico models, and **Kimber Kable** will demonstrate their latest analog and digital cables. Representatives from the Memphis, Tennessee, and Ogden, Utah, companies will be present to answer questions about their products. Location: Virtual Properties Training Room, 2750 Premiere Parkway, Duluth. Guests welcome, refreshments provided. For information, contact John Morrison, President, at (770) 330-3919 or jhm3@bellsouth.net; or Chuck Bruce, VP, at (770) 550-1434. For additional details, consult the club's website: www.a-vcoa.org.

MICHIGAN

■ Thursday, February 19, 5–pm: ***Overture Audio*** (2460 W. Stadium Boulevard, Ann Arbor) is having a musical evening featuring **Linn Products**. Representatives from Linn will present the Midwest launch of the new Akurate Exakt system, featuring Exakt Akudorik loudspeakers. The Exakt Akudorik has an innovative stand design that integrates Exakt technology into a compact speaker that will look and sound great in any room. Refreshments provided. Details at www.overture-audio.com.

MINNESOTA

■ Tuesday, February 17, 7–9pm: The ***Audio Society of Minnesota***'s monthly meeting will feature **exaSound Audio Design**. Representatives of exaSound will be on hand to demonstrate their new eight-channel DSD DAC. The meeting will be held at the Pavek Museum of Broadcasting (3517 Raleigh Avenue, St. Louis Park). Refreshments will be served; guests, visitors, and new members are welcome. For more information, visit www.audiomn.org.

CZECH REPUBLIC

■ Friday–Saturday, March 27–28: the ***High End Praha Audio/Video/Smart Home Show*** takes place in Prague. Find more details at www.audio-video-show.cz.

full-range. Younger consumers are showing increasing interest in vinyl, and the sales statistics for the venerable medium are also looking very positive, so it could be that Musical Fidelity has got its timing just right.

UK: SOUTHEND-ON-SEA, ESSEX

Paul Messenger

The continued and growing interest in vinyl has stimulated production at Rega Research, which was headed for a record month of turntable production when I visited last November. I'd written an Update on Rega's RP turntables for the October 2014 issue, but felt that a trip to Southend-on-Sea was long overdue, if only to discover what was happening with one of Rega's lower-profile products: its moving-coil phono cartridge.

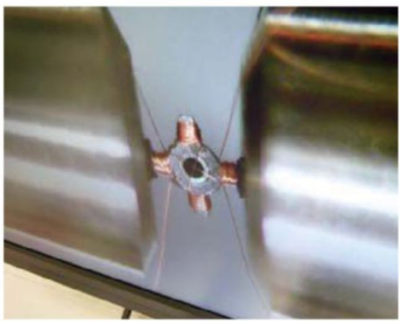
I'd last visited Rega more than three years before, in summer 2011, and found the visible growth since then very impressive. An extra mezzanine area was in use, and more building was still going on. The workforce is now up to 90, and the production areas were buzzing away, even on a Friday afternoon.

Rega introduced its first low-output moving-coil cartridge, the Apheta, as long ago as 2006. It's unusual in lacking the usual tie-wire and damping block in its motor, and while it wasn't a perfect transducer by any means, due to a high-frequency peak at the top of the audioband,[4] it did deliver impressive coherence and speed, and fine dynamic expression. In 2006, production of the Apheta was a fairly low-key affair; each cartridge took a worker a day to make, and required significant tweaking.

Recently, however, Rega decided to plow some of its profits back into redesigning the Apheta and, more significant, to carry out some serious production engineering—the latter more the exception than the rule in the manufacture of low-output MC cartridges.

The Apheta's fundamentals remain much as before, but each element has been refined for the new Apheta 2 ($1895). It has a more solid (if still transparent) body, and a lower moving mass, the latter moving the treble peak higher—at about 18kHz, it's now effectively beyond the range of human hearing. A much more costly MC, the Aphelion, which has a boron-rod cantilever instead of the Apheta's aluminum tube, is also planned.

Rega credits Ashley Watson for his skill in winding the Apheta's tiny coils.



The Apheta 2's motor coils are wound on a cross-shaped soft-iron former.

PHOTOS: PAUL MESSENGER

Consistency of production has been much improved with the application of the most recent techniques in microprecision engineering—*eg*, wire-and-CNC-based spark-erosion—to make the tool used to form the Apheta's butyl rubber hinge, and to form the soft-iron crosses on which the coil wire is wound. Much of Rega's new investment has gone into computer-assisted imaging equipment. Magnification up to 100x, now available at an affordable price, is of considerable help when winding coils using wire just 0.018mm in diameter, which was quite invisible to these naked eyes. Rega has also developed special display graticules that assist in aligning the profile of a specific stylus with the cross and coils within 0.5°—the crucial element in achieving good sample consistency.

All but one unit of a preproduction run of a dozen showed no need for individual tweaking, each Apheta demonstrating unfiltered crosstalk measurements of 28–29dB (the single exception fell victim to a faulty magnet). Rega's secret weapon seems to be 23-year-old Ashley Watson, who not only showed splendid dexterity in winding and tying off the minuscule coils with remarkable speed, but also demonstrated that an ancient Japanese audio guru wasn't an essential part of the assembly process. We're so used to seeing lines of Asian women working away on fiddly tasks of audio production that I was surprised when Rega's proprietor, Roy Gandy, told that in 40 years of experience he's seen no difference between the innate dexterities of men and women; it all comes down to individuals, not genders.

I've also recently seen and heard the latest example of the seriously upmarket Naiad turntable. It now has a dedicated, ultrastiff, ultralight wall bracket made of carbon-fiber composite, and a main bearing of superhard zirconium dioxide.

US: NEW YORK

John Atkinson

I was saddened by the e-mail. Tom Gillett, whose writing on audio and music have been published in *Stereophile* for more than 30 years, was resigning. Then Wes Phillips e-mailed me: "I'm very proud of my association with *Stereophile*. I always have been and always will be," he wrote, concluding that "I still have a lot of things to say about music and hi-fi and I think I have a lot to offer. But perhaps, at this point, *Stereophile* is not the platform that fits most naturally (words I never thought I'd utter). . . . " This issue is the first in a long time, therefore, that neither Sam Tellig nor Wes Phillips is listed on our masthead (p.8).

Tom Gillett's alter ego, Sam Tellig, first appeared in *Stereophile*'s January/February 1983 issue (Vol.5 No.10), as the byline of a new column, "The Audio Cheapskate," in which he surveyed moving-magnet phono cartridges. With his focus on affordable audio and his superb talent as a writer, Sam quickly became this magazine's most popular writer. Yes, Sam burned out a few times, and "The Audio Cheapskate" morphed first into "The Audio Anarchist," then into "Sam's Space," so that Tom could expand his writing into other areas of audio. But there was never any doubt that the flame of his passion for music always burned bright.

As John Marks wrote when he heard the news, Sam Tellig "developed not only a persona but also an authorial tone that was extremely effective in holding the reader's

4 See Art Dudley's review at www.stereophile.com/phonocartridges/1206rega/index.html, which includes a detailed view of the motor.

2014 S stereophile Recommended Component

YG Acoustics™ is proud to be recognized by Stereophile Recommended Components for six consecutive years and counting

Pure Clarity...

CARMEL™ 2

YG ACOUSTICS™

www.yg-acoustics.com +1-801-726-3887

attention and bringing him along for the ride. Perhaps it was Tom Gillett's background as a direct-mail copywriter, but Tom's columns usually had a sense of pacing—of knowing when to give the reader a little break—that very few audio writers have ever had." And it was Tom Gillett's expertise in subscription promotion that played a significant role in the 1980s and 1990s in increasing *Stereophile*'s circulation to, at its peak, more than 90,000. (It was to keep his audio writings distinct from his professional activities in magazine publishing that led Tom to reverse "Gillett" into "Tellig.")

Wes Phillips joined *Stereophile* in 1994, first as a freelance writer, and then, in summer 1995, as a full-time employee. He left our staff at the beginning of 1999, to take up a career in public relations, but returned to our pages as a freelance contributor a decade ago. His first equipment review for the magazine was of the Conrad-Johnson Premier Eleven power amplifier, in our October 1994 issue;[5] his final equipment review was of the Luxman B-1000F amplifier, in February 2011.[6] Sadly, since then, increasing ill health has prevented Wes from writing for *Stereophile*, but I felt we should keep his name on the masthead in tribute to all that he had contributed to the magazine.

I offer my thanks to Wes and Tom/Sam for all that they gave *Stereophile* during their decades-long relationships with the magazine; I look forward to reading their writings on our shared passions, wherever they appear. ■

Taken at a *Stereophile* show a decade ago, this photo shows Tom Gillett in a typically irreverent mood. (From left–right in the foreground: Kal Rubinson Art Dudley, Wes Phillips, Tom, and John Atkinson, with Larry Greenhill peeking over Art Dudley's shoulder.)

5 See www.stereophile.com/tubepoweramps/403/index.html.

6 See www.stereophile.com/content/luxman-b-1000f-monoblock-power-amplifier.

PrimaLuna®

Our Name Is Sound. You Know It.

DiaLogue Premium HP. The Finest Integrated Amp You Can Buy.
Class A Rated Sound and the Best Build Quality in the World.

"Primaluna's DiaLogue Premium HP is an integrated amplifier whose sound quality closely approaches that of pairings of reference Class A preamps and power amps. PrimaLuna has another winner." — Robert Deutsch, *Stereophile*, December 2014

$4399— Take a tour of the insides at: primaluna-usa.com

DiaLogue Premium Separates
The Ultimate Expression of European Engineering

2014 the absolute sound Editors' Choice Awards

"If I were building a system in the $20-$50K range, I can't imagine needing to spend more than this for a linestage… Another home run for PrimaLuna!" — Jeff Dorgay, *Tone Audio*,

"I tried to find fault with the PrimaLuna DiaLogue Premium (amplifier). I failed." — Art Dudley, *Stereophile*, February 2014

2014 stereophile Recommended Component CLASS A

Preamp $3199

Power amp
$3199/6398 pair

Power amp HP
$3899/7798 pair

Go to **primaluna-usa.com** to learn more and to find your local dealer.
info@primaluna-usa.com 909.931.0219

ANALOG CORNER

BY MICHAEL FREMER

THIS ISSUE: Listening impressions of the Kiseki Purpleheart N.S. phono cartridge and the Lamm LP 2.1 phono preamplifier.

The Return of an Old Smoothy & the Introduction of a New One

At the 2011 Consumer Electronics Show, Herman van den Dungen handed me a surprise: a brand new Kiseki Blue cartridge manufactured from new-old-stock parts. It wasn't mine to take home—only to look at, to prove it was real.

Herman van den Dungen may not be a household name even for audiophiles, but his products are: his PrimaLuna electronics are exported from the Netherlands to the US and distributed by tube connoisseur and collector Kevin Deal for PrimaLuna USA.

In the 1980s, Kiseki was legendary among audiophiles, even if their cartridges' prices were beyond the reach of most. But the brand's history is less well known—and younger analog devotees may not have heard of Kiseki at all. While the name is Japanese, and many Kiseki cartridge parts are made there, the brand itself was created by van den Dungen. In the early 1980s, he and former Sumiko principal Dave Fletcher were having trouble communicating with and being supplied by Sugano Yoshiaki, designer and builder of Koetsu cartridges, and his agent and daughter, who spoke only Japanese and some German. Prepaid monthly orders of 30 or so cartridges were arriving more and more slowly, and Fletcher and van den Dungen began to hear a variability in their sound that required them to listen to every cartridge, and return for repair those that didn't make the grade, paying fees for return shipping and the repairs.

The story of how van den Dungen and Fletcher each lost his Koetsu distributorship to the late Yasuo Nakanishi, another legend of Japanese high-end audio, is one I won't recount here, as I have only heard one side of the story.

However, the loss motivated van den Dungen to come up with a line of cartridges that would sonically compete with Sugano's but, if possible, at lower prices. After designing cartridge bodies and having them machined locally in the Netherlands, he shipped his design specifications for the stylus, cantilever, coil, magnet, and tuning to several unspecified Japanese cartridge manufacturers, who built them and returned them to him for blind auditioning. Thus was born the Kiseki brand, built in Japan by Goro Fokadu to van den Dungen's specs. According to vdD, *kiseki* means "miracle."

奇跡

According to Herman van den Dungen, *kiseki* means "miracle."

The first model, the Kiseki Blue,[1] was priced to compete with the Koetsu Black. Van den Dungen soon had orders, and reportedly was selling hundreds of Kisekis each month. Dan D'Agostino, who founded Krell in 1981, began distributing Kiseki cartridges in the US. The line grew to include the Purpleheart, the Blackheart, the Agate, and the Lapis Lazuli—the latter two available in a variety of candy colors. Worldwide, the Kisekis were very well received by reviewers and consumers alike.

Audio reviewer Marco Benedetti, Italy's "Mr. Analog"—he narrated the Italian edition of my DVD *21st Century Vinyl: Michael Fremer's Practical Guide to Turntable Set-Up* (16,000+ sold so far in three languages; thanks, everyone!)—is a Kiseki enthusiast. A few years ago, at an Italian audio show, he exhibited his collection of Kisekis and demonstrated them for a roomful of covetously appreciative listeners.

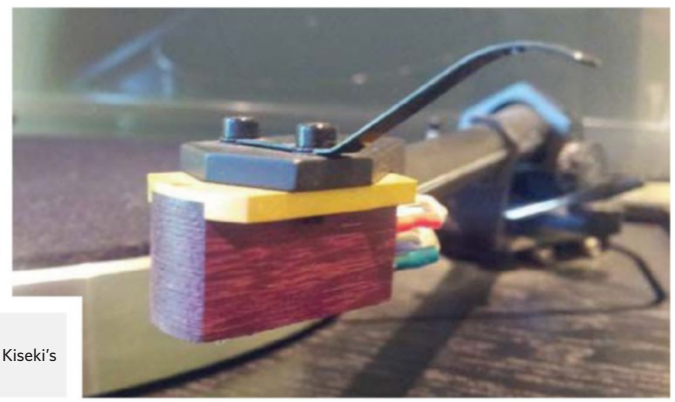
But soon after the introduction of the Compact Disc, Kiseki was no more. Sales dropped, and Herman van den Dungen was busy with other projects. Now, thanks to vinyl's growing popularity, the famed cartridge line has returned.

1 Reviewed in its final version by Dick Olsher in March 1992; see www.stereophile.com/content/kiseki-blue-goldspot-phono-cartridge

KISEKI'S NEW LINES: N.S. AND N.O.S.

That Kiseki cartridges are again being built, and in the 21st century, is itself a minor *kiseki*. Kiseki N.S. (New Style) cartridges feature new parts but technology based on the design of old parts, and have a new, somewhat shorter body than the originals. The Kiseki N.O.S. (New Old Style) models are made using a mix of old Kiseki parts ca 1981–1990 and new parts.

Which parts are used depends not on their age, but on which are better for a given unit. Enough parts are available for Herman van den Dungen to produce 100 Kiseki Blue N.O.S. cartridges, with one reserved for vdD himself. Three of the four other original models will follow as N.O.S versions,



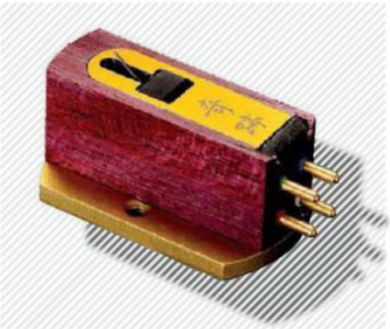
"Sweet, smooth, detailed sound." Kiseki's Purpleheart N.S.

also subject to availability of parts. At the moment, vdD is not planning a Lapis Lazuli N.O.S.

Four years after the announcement of Kiseki's resurrection, at last spring's T.H.E. Show Newport Beach, Upscale Audio's Kevin Deal placed in my hands a Kiseki Purpleheart N.S ($3299). It was 25 years ago that the late Harry Pearson handed me an original Kiseki Blue, which I still have.

If you care about looks, the Purpleheart N.S. has the goods. Accenting its 30mm-long body of purpleheart wood is a burnished top plate of an unspecified brass-like metal, into which are tapped threaded mounting holes. A cutout in the front of the plate exposes the body's wooden top—a nice touch. Too bad the iconic bottom plate is hidden from view once the cartridge is mounted in a headshell. I don't know what the Japanese ideograms signify. Could be Häagen-Dazs, for all I know.

The Purpleheart weighs 7gm and has a cantilever of solid boron 0.3mm in diameter, to which is attached a nude, mirror-polished, line-contact diamond stylus whose tip has a radius of 4x120µm. The coil former



Broken in and tracking at 2.5gm, the Kiseki Purpleheart tracked most anything I threw at it.

is made of "pure iron," and around it are wound coils of copper wire. The Purpleheart's channel balance is claimed to be within 0.2dB, its channel separation an excellent 35dB at 1kHz.

Continuing with Kiseki's specifications, the Purpleheart N.S.'s output voltage is 0.48mV at 5cm/s, its internal impedance 42 ohms. Its tracking ability at 315Hz with a vertical tracking force (VTF) of 2.6gm is 80µm. The range of VTF is 2.0–2.6gm, with an optimal setting of 2.46gm. The dynamic compliance is moderate, at 16µm/mN, and the recommended loading is 400 ohms. Kiseki recommends 50–100 hours of break-in; based on my listening, so do I (see below).

When you read, in a cartridge's specs, an output of 0.48mV and an internal impedance of 42 ohms, both of which are relatively high, you know that that output has been achieved with more turns of wire on the coil, which raises internal impedance—an old-school approach. Designs more modern than the Purpleheart, such as Lyra's Atlas, can have high output (0.56mV) and low internal impedance (4.2 ohms), which means their coils have relatively few turns, thus lower mass, thus faster response time.

Sweet, Smooth, Detailed Sound: I installed the Kiseki Purpleheart N.S. in my Kuzma 4Point tonearm, installed on my Continuum Caliburn

elusive disc
A Trusted Name Since 1989!
www.elusivedisc.com
For all your Hi-Fi needs!
What you can expect from us:
• Expert Cartridge Installation & Set Up.
• Excellent Customer Service.
• Speedy & Safe Delivery.
• Expert Help & Advice.
Musical Fidelity M1 ViNL MM/MC Phono Stage & V90 DAC, Phono Stage, Headphone & Power Amps
NEW! Graham Phantom Elite & Phantom III Tonearms
Lastest Evolution of the Multi-Award Winning Arm!
Sota Moonbeam & Music Hall MMF-5.1 Turntables
All Sota & Music Hall Tables Available!
VPI Scout Jr. & Prime Turntables
All VPI Tables, Tonearms & Dust Covers Available!
Clearaudio Concept & Concept Wood Turntables
Multi-Award Winning Tables! All Models Available!

turntable, and ran it through two phono preamplifiers: a Ypsilon VPS-100 with MC-10L step-up transformer, and a Lamm Industries LP2.1 Deluxe (also reviewed in this column). Kiseki recommends loading the Purpleheart with 400 ohms, which follows the rule of thumb for loading: about 10 times a cartridge's internal impedance. With no loading plugs, the Ypsilon MC-10L presents a load of 400 ohms, the same as the Lamm LP2.1's fixed input load for moving-coils, so both were appropriate for the Purpleheart. After break-in, I found the Purpleheart to track best with a VTF of 2.5gm.

The Purpleheart N.S. produced a rich, inviting harmonic palette directly out of the box, but after some 50 hours its suspension became more supple and responsive, which improved its tracking of heavily modulated piano recordings and smoothed out some harsh-sounding sibilants. Broken in and tracking at 2.5gm, the Purpleheart tracked most anything I threw at it.

Unlike my original Kiseki Blue, which always sounded too soft and rolled off on top, the Purpleheart's tonal balance was subjectively linear; if, in reality, it's not linear, it did an admirable job of hiding its deviations from linearity. The result was a rich, supple sound with a tube-like tonality and musical flow. Yet when I played anything that should sound hard and edgy, the Purpleheart reproduced enough of those qualities to make me hear what the recording's producer intended me to hear.

The perfect introduction to the Purpleheart N.S.'s riches was the lush-sounding *Sine Qua Non: Serge Gainsbourg Re-imagined* (2 180gm LPs, Coup Perdu CPLP001). This 69-minute instrumental album (the first 1000 copies also include a 48-minute bonus LP, *Sine Qua Non Plus*) was recorded in Abbey Road's famed Studio Two, where the Beatles recorded most of their music. You don't have to know Gainsbourg's songs to luxuriate in Ros Stephen's languidly paced arrangements for a small ensemble (also named Sine Qua Non), mostly painted with saxophone or piano leads against backdrops of lustrous strings. It's available only directly through Coup Perdu's website (www.coupdarchet.com). The price is £50, which with currency conversion and shipping ends up costing about $150, but it's a late-night listening treat that the Purpleheart brought to life.

Where appropriate, the Purpleheart's rich tonality was bolstered by its generous delivery of vivid instrumental textures and three-dimensionality. The cartridge didn't have a sonically unpleasant bone in its body, but when the *recording* did, the Kiseki gave me enough of it to communicate it effectively, though not with the full measure of possible unpleasantness. It didn't hold back the deliberate sonic horror that is Bruce Springsteen's *The River*, but a more revealing cartridge like the Lyra Atlas, which costs almost three times as much, lets you hear all of the reverberant, icy mess that invades the stage on many tracks.

The Purpleheart's moderate transient speed meant that the music's hardest edges were somewhat softened, and that its less-than-full expression of macrodynamics didn't allow it to produce the full thrust of the most explosive recordings. But more than making up for what it nips and tucks in those regards was the Purpleheart's lush yet transparent midrange. If there's a more clogged, reverberation-drenched, *busy* recording

Dogmas should never be petted.

zA2.1 Floor Stander

- Only 38" [96 cm] tall
- Adjustable response
- 87 dB (1W/1m)
- 30 Hz - 20 kHz
- Power: 40 - 350 W/ch
- Solid wood baffle

zA1.1 Monitor

- Exceptional bass response
- Adjustable tweeter level
- Easy amplifier load
- Similar sound to zA2.1
- 17" Tall [43 cm]
- Choice of several figured wood finishes

zA2.1A (Active Version) - New

- Two 190W amplifiers in each enclosure
- Connects to any audio source, even directly to portable players
- Ultra low distortion and noise
- DSP response optimization

There's a lot of dogmatic hype in audio, and thanks to that, many of you will spend a good bit of your money and quality time buying and experimenting with equipment that ultimately lets you down, when you could have been listening to music and letting it reach your heart and soul. If what you want is finally to relax and enjoy the music, then it's time to leave that barking dogma behind.

You might have heard other companies say something like that before, but we have numerous customers who thank us for finally ending their quest, even after years with our speakers.

Everything sounds better on JansZen's (even MP3's) than on practically anything else, regardless of price or size. The improvement obliterates the differences you'll hear from changing cables or making other fine adjustments.

Using simple and elegant technology, JansZen speakers make music. They deliver exceptionally well articulated and natural sound from the only electrostatic drivers that are entirely correctly designed and made, and uniquely and seamlessly mated to high grade woofers. The results border on the magical.

JansZen originated the practical electrostatic speaker sixty years ago, and no other maker has surpassed us in sound or come close to our electrostatics' durability.

If you've heard other electrostatics, you're already familiar with their distinctive clarity, openness, and nuance, but JansZen goes well beyond that. Their moderately narrow directionality reduces room interaction, yet leaves just the right amount of room ambiance along with a reasonably wide sweet spot, unlike the beaming that you might think is normal for electrostatics.

They're also compact and attractive, fitting comfortably into any room, yet go deep in the bass, and can produce high volume levels. They're not dipoles, so there's no sound from the back to make them hard to set up or introduce unnatural comb filtering artifacts.

Call or email us now about sampling the JansZen experience at a dealer or on a 30 day home trial. We'll listen to you carefully, and leave you with a sense of clarity about the speakers that matches the clarity *of* the speakers.

JANSZEN
ELECTROSTATIC SPEAKERS

Straight to the heart.

www.janszenaudio.com
+1 (614) 448-1811

than "Wah Wah," from George Harrison's *All Things Must Pass* (3 LPs, Apple STCH 639), you'll have to tell me about it. The Purpleheart's ability to sort out this track's many reverb-drenched electric guitars produced a new perspective on an old favorite. A reissue of Jeff Buckley's *Grace* (2 45rpm LPs, Columbia/ORG 194) was particularly stirring through the Purpleheart, as was his dad, Tim Buckley's, *Goodbye and Hello* (LP, Elektra EKS-7318), which hearing Grace had moved me to spin after a decade's rest on the shelf.

The cartridge the Purpleheart most reminded me of was Sumiko's wood-bodied Palo Santos Presentation ($3999), which has an equally lush, pleasing midrange and, for $700 more, a somewhat more generous expression of dynamics.

Overall, the Kiseki Purpleheart N.S. is a physical and sonic beauty. It will reproduce all musical genres well, but I found it especially suited to acoustic jazz and classical. In today's world of crazy-priced cartridges, it offers a sophisticated sound well beyond what you'd expect at its $3299 price, and though it thrives on classical and jazz, it handled rock and other electronic music as well as if not better than some other, more costly cartridges that have a lush midrange but a softer sound overall.

LAMM INDUSTRIES LP2.1 DELUXE MM/MC PHONO PREAMPLIFIER

Introduced at the 2014 Consumer Electronics Show, Lamm's LP2.1 Deluxe is a pure class-A, zero-loop-feedback, dual-mono, moving-magnet/moving-coil phono preamplifier with a 6X4 full-wave voltage-rectifier tube and pairs of Russian-made 6C3P and 6C45P-E triode tubes. (Vladimir Lamm uses the latter two types in his more expensive LP1 Signature phono preamp.) The LP2.1's passive RIAA network sits between its first and second gain stages.

Two Jensen JT-44K-DX 1:10 step-up transformers provide an additional 20dB of gain for the MC input, for a total of 60dB. The LP2.1 costs $8690, or $8990 for the Deluxe version, which, Lamm told me at CES, has an upgraded power supply (greater capacitance), polystyrene bypass capacitors for the capacitors in the signal path, and a 20.5-lb damping panel to isolate its electronic components from induced resonances.

Lamm provides some of the most complete specifications of any audio company, including a full set of measurements, averaged from tests run on 10 LP2.1s. From tubed gear you can't expect the ultra-low distortion figures possible with solid-state, but Lamm's claimed phono-overload margins at 1kHz of 225mV (MM) and 22.5mV (MC) are generous. The LP2.1's output impedance of 2.3k ohms is low enough to be compatible with most preamplifiers.

The LP2.1 Deluxe is about as basic as a phono preamplifier can be. On the rear panel are an On/Off switch, mirror-imaged pairs of MM and MC inputs, toggle switches for choosing between them, and outputs jacks (all RCA). There are no MC loading options, but the LP2.1's 1:10 transformer means that an MC cartridge sees a 400 ohm load—overall, a good compromise for cartridges with internal impedances of about 40 ohms or less.

Lamm's industrial-looking LP2.1 Deluxe uses Jensen transformers (left) for its MC input.

Spectacular Soundstaging, Superb Overall Sound: In MM or MC mode, the LP2.1 Deluxe was as quiet as most solid-state phono preamps, and quieter than some. Backgrounds were *dead* quiet, musical eruptions volcanic, and top and bottom extension apparently limitless. The sound was not at all

"tubey," yet there were a liquidity and a generosity of musical flow that tubes are generally better at producing, especially in conjunction with a tube voltage rectifier.

The first cartridge I tried with the LP2.1's MM input was a Clearaudio Maestro V2. A relatively low-output (3.6mV) MM that thinks it's an MC, the fast-sounding Maestro V2 reproduces leading-edge transients with close to the speed of a moderately fast MC. I listened to Lyn Stanley's *Potions: From the 50's* (2 LPs, A.T. Music 3010), mostly recorded and mixed, in analog, by the great Al Schmitt, at Capitol Studios. The combo of piano, bass, and drums, augmented by horn or guitar on some tracks, sounded both well detailed and harmonically complete, nicely bridging the gap between solid-state "detail" and tube "warmth." Cymbals shimmered nicely, snares snapped, bass lines were taut and nimble. The piano attack was clean and not overly sharp, the sustain generous but not too much so (as it is through some tubed phono preamps), and decays faded naturally into "black" backgrounds.

However, most people spending nearly $10,000 on a phono preamplifier will use the LP2.1 with MC cartridges, so I focused most of my attention there. The Lyra Atlas has an internal impedance of 4.2 ohms and likes to see, at most, around 100 ohms; the Kiseki Purpleheart N.S., at 42 ohms, should be loaded with about 400 ohms.

I thought the LP2.1 Deluxe's overall sound through its MC-input transformers was not as open, airy, or, especially, as dynamic as through its MM input, and I've heard both the Lyra and the Kiseki sound more airy, extended, and, especially, dynamic through the Ypsilon VPS-100, which also uses tubed voltage rectification. Of course, the Ypsilon costs *ca* $34,000, more than three times as much as the Lamm.

Still, for the LP2.1 Deluxe's price or more, the sound of MCs through the LP2.1's transformers was impressively fast, detailed, open, dynamic, and resolving—all without added glare, grain, or etch. With the LP2.1, detail and speed came not with a downside, but with bonuses of liquidity and flow.

The LP2.1 Deluxe was competitive with all of the outstanding phono preamps costing around $10,000 or less that I've heard, such as the Manley

With the Lamm LP2.1, detail and speed came not with a downside, but with bonuses of liquidity and flow.

Labs Steelhead[2] and the Pass Labs XP-25[3] (though both of those offer far more loading options), and it's better than many. It's the most neutral-sounding tubed phono preamp I've heard for under $10,000, and among the most neutral I've heard at any price. It doesn't sound tubey.

Were the LP2.1's relatively inexpensive transformers (*ca* $200 each at cost to Lamm; the overall product's retail price multiplies the cost of a part by around five times) holding back its greatness with MC cartridges? To find out, it was easy enough to run the Ypsilon MC-10L step-up transformer ($6000) through the LP2.1's MM input.

This combination seriously upped the sound quality along with the price. The Lyra Atlas and the Kiseki Purpleheart N.S. both now sounded far more open on top (even though the load seen was still 400 ohms), more three-dimensional, and, especially, more dynamic. Large-scale dynamic contrasts now had the full explosive quality that I know the Lyra Atlas is capable of delivering from the grooves. The differences in dynamics and high-frequency response between the Atlas and the Purpleheart, which the LP2.1 used with its internal transformers had somewhat papered over, were now fully audible.

One of the records I'd been playing through the LP2.1's MM *and* MC inputs was the latest outing from Medeski Scofield Martin & Wood: *Juice* (2 180gm LPs, Indirecto IR 16), mastered by Alan Silverman and Paul Gold. The combo of Lamm LP2.1 and Ypsilon MC-10L produced faster, more precise cymbal transients, plus more air, on a somewhat wider and, especially, deeper stage.

That got me pulling out other familiar LPs with which to compare the Lamm and Ypsilon through the MC-10L transformer. In many performance parameters—especially in terms of the musical flow and liquidity of tubes *without* their warm colorations—the combos were more similar than different, despite the huge difference in price: the Ypsilons cost a total of $40,000.

The MC-10L with VPS-100 still had more punch on the bottom—greater solidity, weight, and majesty—and blacker blackness between notes. But for not much more than one-fifth the price, you can get close.

You could buy the Lamm LP2.1 Deluxe now and, believe me, you'd enjoy the hell out of playing through it music of every genre. Later, when your bank balance had recovered, you could add the outboard Ypsilon MC-10L (or MC-16L or MC-20L, depending on your cartridge's output) and seriously up the sound quality.

I doubt Vladimir Lamm is happy reading about this mix'n'match approach. I understand that he designed the LP2.1 Deluxe to retail for under $10,000, and the result is fully competitive with anything at or near that price. But one of the attractive things about that price is that you can buy an LP2.1, enjoy it now and for a long time to come, and, later, take it to a much higher level of sound.

Out of the box, Vladimir Lamm's LP2.1 Deluxe is a smooth-sounding, well-detailed, impressively quiet phono preamplifier that will equally satisfy rockers, metalheads, beboppers, folkies, and enthusiasts of classical music. That's why I liked it so much. ■

Michael Fremer (fremer@analogplanet.com) is the editor of AnalogPlanet.com, a website devoted to all things analogical.

2 Reviewed in *Stereophile*, December 2001; see / www.stereophile.com/phonopreamps/935/index.html.

3 Reviewed in *Stereophile*, March 2011.

CONTACTS

Kiseki—Durob Audio BV
PO Box 109
5250 AC Vlijmen
The Netherlands
Tel: (31) (0)73-511-2555
Fax: (31) (0)73-511-7583

US distributor: Upscale Audio
2504 Spring Terrace
Upland, CA 91784
Tel: (909) 931-9686
Web: www.upscaleaudio.com

Lamm Industries Inc.
2513 E. 21st Street
Brooklyn, NY 11235
Tel: (718) 368-0181
Fax: (718) 368-0140
www.lammindustries.com

Products: PRE60 and A60

Introducing Primare's 60 Series

Balance. Harmony. *Lagom*.

It lies within us all, that sense of perfect balance, of all things in harmony. When things simply feel right.

Lagom is the Swedish word for this. Not too much. Not too little. Just right.

The 60 Series celebrates Primare's 30-year pursuit of *lagom* within each and every one of the components that it designs and builds – the best expression yet of that sense of balance and harmony, of simple perfection.

The PRE60 preamplifier is a supremely sophisticated system control center that effortlessly brings the ever-expanding world of music to your system in all its richness and variety, whether the source is analog or digital, wired or wireless.

The A60 amplifier has the capacity to deliver instantaneous current delivery with extremely low distortion, resulting in a naturally powerful, fast, clean and agile sound.

Entirely designed and hand built in Sweden, the 60 Series is a resounding statement of exemplary quality and performance, and the next step in Primare's evolution in creating products for which every aspect of the design and implementation is harmoniously balanced.

Lagom – you will know it when you see and hear Primare's 60 Series.

Primare – the sound and vision of Scandinavia

VANA LTD

Exclusive North American distributor

728 Third Street, Unit C
Mukilteo, WA 98275 USA
p: (425) 610-4532 / f: (425) 645-7985
www.vanaltd.com / sales@vanaltd.com

Telefunken 6922/E88CC
Made in Ulm, Germany in 1968, these are the most sought after and rarest 6922 type ever. An incredible upgrade to your gear. Find a HUGE inventory of vintage tubes only at:
www.upscaleaudio.com

PRECISION SELECTED RARE TUBES

Upscale Audio

SOUTHERN CALIFORNIA

HIGH-FIDELITY MUSIC SYSTEMS

MANLEY
Chinook Phono
in Stock

PRIMALUNA DiaLogue Premium
Integrated Amp in Stock

SONUS FABER
Venere
in Stock

2012 the absolute sound PRODUCT OF THE YEAR AWARDS

VPI
HRX in Stock

NOLA
KO in Stock

AUDEZE
LCD-3

Upscale Audio is always on the hunt for new products. Check our website for the latest.

IN STOCK: ACOUSTIC ZEN, AES, AH! TJOEB, ANTHEM, ARCAM, ATMA-SPHERE, AUDEZE, AUDIO QUEST, B&K, BEL CANTO, NZ MICRO, CARY, CHANG LIGHTSPEED, CLEARAUDIO, COINCIDENT, DH LABS, DYNAVECTOR, ERA, EQUI-TECH, EXACTPOWER, GALLO, GRAHAM, JL AUDIO, KIMBER KABLE, LYRA, MAGNUM DYNALAB, MANLEY, MARTIN LOGAN, MUSIC HALL, MYSTÈRE, NITTY GRITTY, NOLA, NORDOST, NOTTINGHAM, OPERA, PATHOS, PEACHTREE, PRIMALUNA, PRIMARE, PS AUDIO, QUAD, REGA, REL, SME, SOOLOOS, SONUS FABER, SUTHERLAND, TRI-PLANAR, VPI, VINCENT, AND VIENNA ACOUSTICS

UPSCALE AUDIO
HIGH FIDELITY • MUSICAL SYSTEMS

www.upscaleaudio.com

2504 Spring Terrace • Upland, CA 91784
[909] 931-9686 FAX: [909] 985-6968

LISTENING BY ART DUDLEY

THIS ISSUE: The Audiodesksysteme Gläss Vinyl Cleaner is put through its paces.

It's a Clean Machine

I'm old enough to remember Fizzies: tablets that were promised to transform mere water into an effervescent soft drink. They showed up on my radar when I was five, at a time when impatience stood between me and the full Fizzies experience: I couldn't wait for the Bromo-Seltzer–like tablet to dissolve completely, so I was rewarded with little flavor and lots of undissolved sugar shards. At my present age, I would be likelier to drop a Fizzie into a glass of water, walk away, and forget I had ever done so.

Fizzies came to mind the first time I used the Audiodesksysteme Gläss Vinyl Cleaner ($4450), a sample of which was loaned to me late last year by its US distributor, Ultra Systems. For those who haven't already read the reviews by Fred Kaplan and Michael Fremer, in these pages[1] and on Analogplanet.com,[2] the Vinyl Cleaner is a fully automated, wet-bath-and-blow-dry record-washing machine that uses cavitation and distilled water, the latter enhanced with a surfactant, to remove contaminants from LP grooves. Cavitation is, literally, the creation of cavities—which, in a liquid medium, means the creation of bubbles. Microscopic bubbles, at that. *Zillions* of them.

Audiodesksysteme Gläss Vinyl Cleaner

Pause for a moment and bear in mind that the width of a stereophonic LP groove is 25.4µm—about one-third the diameter of an average human hair—while its depth is usually no greater than two-thirds its width. (The width of a typical *mono* groove made with a mono cutter head ranges between 55 and 80µm.) Keep in mind, also, that the modulations within the groove are far smaller than the groove itself, and can range in size down to a fraction of a micron: the approximate size of the average bacteria (0.2–0.3µm, to be precise). The size of the *largest* groove modulations is more on a par with that of a red blood cell or a single dust-mite feces, both of which measure about 5µm.

Get the picture? There does not exist, in this world or the next, a brush whose bristles can get in there and mix it up with that crap. Period.

Cavitation is a different kettle of microscopic fish. By using an ultrasonic wave to stimulate cavitation in a cleaning bath, bubbles can be created that range in size down to 2µm, depending on the frequency of the wave. And the agitation created by the movement of these bubbles is such that contaminants, once removed, are carried away from the substrate, and thus prevented from reattaching.

Fizzies came to mind the first time I used the Audiodesksysteme Gläss Vinyl Cleaner.

I know what you're thinking: *Sign me up*.

Which is why Reiner Gläss invented the Vinyl Cleaner. And it's why I asked to borrow one, so that I could see whether, some 55 years after Fizzies, record lovers such as I could experience better living through effervescence, as opposed to mere chemistry.

Full fathom five

I guess I wasn't paying close enough attention. Yes, I'd heard of the Audiodesksysteme Vinyl Cleaner. And, yes, I'd understood that it comprises a fluid tank, an ultrasonic cavitation system, four rotating cleaning drums, a motorized record-drive system, two drying fans, and a microchip-based system to automate and coordinate all of the above. Naturally, as an American, I assumed that the product was enormous and heavy: How else could the thing be done?

Imagine my surprise when a 19-lb carton measuring just 11" by 14" by 16" showed up on my doorstep. *Damn*, I thought. *The cleaning fluid and accessories made it here, but the cleaner itself must've gotten lost.* I opened the carton, and there was the Vinyl Cleaner itself plus two much smaller boxes, containing an AC adapter and two bottles of cleaning solution.[3] Each bottle was the size of one of those little

1 See www.stereophile.com/content/audio-desk-systeme-vinyl-cleaner.

2 See www.analogplanet.com/content/worlds-best-record-cleaning-machine and www.analogplanet.com/content/service-bulletin-audio-deske-owners.

3 Vinyl Cleaner Cleaning Fluid Concentrate costs $19.95 (add 1.2 gallons of distilled water to make cleaning solution to clean 100 used LPs or 200 new LPs). A Fluid 6-Pak costs $99.95. Replacement filters cost $19.95 (can be rinsed out; not necessary to replace in normal use). A set of 4 Microfiber Cleaning Barrels costs $99.95.—**Ed.**

Take it wherever Hugo

The world's most advanced portable headphone amp / DAC

"The Hugo is another giant leap for digital kind. I implore you to have a listen."
- David Price, HiFi Choice, July 2014

"Hugo is a tour-de-force of engineering and delivers fabulous sound quality."
- Noel Keywood, Hi-Fi World, July 2014

"It possesses that elusive 'X' factor, which marks the difference between very good products and truly special ones that touch on greatness."
- Chris Martens, HiFi+, May 2014

"The sound is awe inspiring, Hugo is the benchmark."
- Ed Harris, TheProAudioWebBlog, May 2014

"If you want the best, this is it."
-T3, 2014

Features:

- Playback up to DSD 128 and 384kHz PCM.
- Includes Chord's latest award-winning FPGA DAC.
- Reference-class amplifier drives the most demanding high-end headphones.
- Home and mobile use with 12 hour battery life.
- Five digital inputs including Apt-X Bluetooth.
- Outstanding value at $2,495.

It's not just another headphone amp - it's a Chord.
Read the full story at www.bluebirdmusic.com/Hugo.htm

CHORD

Brooks Berdan Ltd.	**Audio High**	**Goodwin's High End**	**Sound by Singer**	**Quintessence Audio**	**Kemela Audio**
Los Angeles, CA	Mt. View, CA	Boston, MA	New York, NY	Chicago, IL	Atlanta, GA
626-359-9131	650-964-4000	781-893-9000	212-924-8600	847-966-4434	404-522-5168

Distributed in North America by Bluebird Music Limited - Tel. 416.638.8207 - www.bluebirdmusic.com

jars of marmalade one finds on the breakfast tables of nice hotels. I was fascinated.

The Vinyl Cleaner, which is made in Königsbronn, in Baden-Württemberg, Germany, appeared very well crafted and was surprisingly easy to set up. The only real challenge was getting the thing level on my tabletop, the need for which may be obvious. A bubble level is built into the Vinyl Cleaner's top surface, yet its bottom lacks adjustable feet. I used business cards as shims.

With the Vinyl Cleaner both level and reasonably stable, I set about filling its cleaning chamber with the prescribed 4.5 liters of distilled water,[4] after which I dumped in the contents of one bottle of cleaning solution. The bilingual instructions, which are quite good, suggest that air pockets—the unwanted kind, not the bubbles for which we hope—can get into the system whenever one fills a completely empty Vinyl Cleaner; air must be removed by running one full cycle without a record in place, which I did.

Notwithstanding the well-considered raves the Vinyl Cleaner has received, I proceeded with caution; my choice for its maiden voyage was a thoroughly unlistenable, beat-to-hell US mono copy of the Rolling Stones' *Between the Buttons*. As you've no doubt seen from pics of the Vinyl Cleaner, records are loaded vertically—edge-down rather than face-down—into an arrow-shaped slot on the machine's top surface. Not without reason is this opening only 11⅜" long: The dimension is meant to limit just how far into the cleaning chamber a standard LP can fit. And when a 12" record is loaded into the Vinyl Cleaner, its downward travel is stopped at the precise point where its outermost edge is gripped between two rubber-rimmed, counter-rotating turnstiles, which gently turn the disc. It is apparently mostly for this reason that the Vinyl Cleaner can accommodate *only* 12" discs; with any smaller size, it would seem possible for the drive mechanism to grip the disc at a point inward from its edge, thus damaging the groove.

I pressed the Vinyl Cleaner's Start button. It took about five seconds for the LP to begin to spin—prior to which I followed the manual's advice and gave the disc's edge a bit of a nudge. After that, the cleaning chamber filled with the fluid, which had, during setup, flowed straight down into the storage tank below. Viewed from above, the cleaning chamber is a canyon in which the record is flanked by two pairs of cleaning drums, each covered in microfiber toweling and measuring 4.5" tall by 1" in diameter. When the drums are at rest, there's a gap of about ½" between the two pairs. When the cleaning cycle begins, the drums move inward to briefly contact the record, then move back out to their resting positions; then, when the chamber is full, they move back in and begin to rotate, their sides in contact with the record's surfaces. The record-drive turnstiles also move inward and outward, but only slightly. At rest, they're held tightly together, but when the cycle begins, the turnstiles part just enough to let the outermost edge of the record drop between their rubber grommets. At the end of the drying cycle, the turnstiles again come together, expelling the edge and slightly lifting the record.

The entire wash cycle took about 75 seconds. After that, the disc stopped turning, the water drained from the cleaning chamber into the storage tank, and the two drying fans—one for each side of the record—started up. The drying cycle comprised 120 seconds with the record turning at a very slow speed, then 10 seconds at a fast speed, then another 150 seconds at slow, seeming to turn even more slowly, until the machine stopped and a gentle beep told me that this record was done.

The record in question was a noisy one to begin with, and the noise proved to be the consequence of physical damage: After the washing and drying, it sounded neither better nor worse. Perversely or not, I persisted with hard cases: awful-looking, awful-sounding records from lawn sales, garage sales, and the nearest Salvation Army store. With the next two records, the Vinyl Cleaner again made the sound neither better nor worse, but the one after that—a *ca* 1964 blue-label Prestige copy of Sonny Rollins's *Tenor Madness*—produced my *holy shit* moment. The Vinyl Cleaner not only transformed its noisy lead-in grooves into utterly dead-silent ones, it removed 95% of the ticks and pops, and allowed the instruments to sound more colorful and more vivid. As I said: *Holy shit*.

The next LP provided a similar transformation, but here I must pause and reflect: Only now do I realize how lucky I've been to live in a very small town that's miles from the nearest grocery store, pharmacy, or pizzeria—yet that had, for a brief time, its own LP store. And Xavwax wasn't just *any* LP store. It stocked great new records and a frequently replenished supply of used vinyl, the latter accounting for my own copies of *Miles Ahead*, *Sketches of Spain*, *Gerry Mulligan Meets Ben Webster*, *The Jazz Soul of Oscar Peterson*, and Benny Carter's *New Jazz Sounds*. The store's excellent proprietor has moved to Vermont, and I wish him well.

My nice mono copy of *Back to Back: Duke Ellington and Johnny Hodges Play the Blues* (Verve 6055), like other albums purchased from Xavwax, apparently once belonged to a library; there are even Dymo adhesive labels in its run-out grooves. (You can bet I'm always on hand to lift up the tonearm at the end of the last song.) When I bought it, the sleeve looked rough, and the record looked and sounded rough. Now, after one trip through the Audiodesksysteme Gläss Vinyl Cleaner, Duke Ellington, Johnny Hodges, and their band—especially drummer Jo Jones—sounded like their old selves. My record went from G– to VG+ in just under six minutes—or, if you prefer, my $8 mono Verve LP with its DSM center labels is now worth more like $40. (Those Dymo labels are holding it back.)

Were I a more profit-oriented individual rather than just an undisciplined collector, I might think: "I just made $32. If I do that 138 more times, the Vinyl Cleaner will have paid for itself."

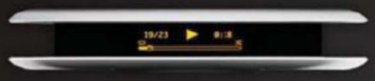
Then there's the transformation the Vinyl Cleaner wrought in my copy of Elgar's Symphony 1, with John Barbirolli and the Philharmonia Orchestra (EMI ASD 540). When I was in Munich last year, I'd reserved my very last hour at the show for record shopping, and selected as my target the display by Blue Danube Records (based in, you guessed it, Vienna). I began browsing the classical selections, setting aside a handful of titles. One was the Elgar, in a later

4 A tip for those lucky enough to own one of these things: The Audiodesksysteme Gläss Vinyl Cleaner requires 4.5 liters of distilled water. Here in the US, distilled water is generally sold in gallons—but a gallon is only 3.785 liters. What the Vinyl Cleaner owner needs to do is to add one full gallon, then another three cups: That will bring the level up to 4.495 liters, which is pretty dang close.

Join the Audio Revolution

SUPER HiREZ™

DSD Downloads & More — Your One-Stop Download Shop



AURALiC Aries
Bridge Streamer

Astell & Kern AK120
High-Res DSD Portable Player

Sony HAP-Z1ES
Hi-Res Music Player with 1 TB HDD

AURALiC Taurus II
Balanced Headphone Amplifier

Meridian Explorer 2
USB Audiophile DAC

Sony PHA-3
Hi-Res Portable DSD
DAC/Headphone Amplifier

AURALiC Vega
Digital Audio Processor

TEAC UD-501
PCM & DSD USB DAC

MYTEK
Stereo 192-DSD-DAC Preamp Version
with Firewire

RECOMMENDED HEADPHONES

Audeze LCD-2
High-Performance
Planar Magnetic
Headphones

Audeze LCD-XC
Reference
Planar Magnetic
Headphones

Sony XBA-Z5
Vertical In-The-Ear
Hybrid Earbuds

Grado
PS1000e

Sennheiser
HD700

The World's Largest Selection Of Audiophile Recordings

ACOUSTICSOUNDS.COM | SUPERHIREZ.COM | 800.716.3553

pressing and graded only VG. Whether it was because of my press badge or my interest in Elgar I don't know, but the proprietor approached me with the kind offer to have a look through his private stock. He produced from under one of his tables a fiberglass flight case containing 70 or 80 LPs. Therein was the same Elgar—in an original white-and-gold–label pressing, the record graded M–. The price was more or less my entire vinyl budget of $50, yet I decided on the spot to bring home one very special record instead of three or four average ones.

Back home, I cleaned the Elgar LP on a borrowed Keith Monks Record Cleaning Machine—which I would return to its owner just a few months later—and settled in to listen. The M– grade was reasonable and fair: I heard a few small ticks on both sides, and in the fourth movement there was a bit of groove distortion, lasting about one second. No big deal, but I was disappointed to find that the recording itself was less spectacular—less open, less colorful—than I'd expected. Just one of those things, I figured.

A few weeks ago I remembered that LP, and decided to run it through the Vinyl Cleaner. I was gobsmacked. Now there were no ticks—zero, zilch, none—on either side. The one-second distortion in the fourth movement endured, but seemed less objectionable. And, above all, the thing that unfolded in front of me was among the smoothest, most colorful, most delicately clear and brilliantly insightful recordings of orchestral music I've heard. That record was a *bargain*.

But even that doesn't compare to last Saturday, when I discovered in my collection a record I'd forgotten I even had: the Società Corelli's recording of Vivaldi's *The Four Seasons* (RCA Living Stereo LSC-2424). The jacket was frayed on all edges, and the inner sleeve torn in two places—but the disc itself was a shaded-dog pressing with 1S/1S stamper markings, so it seemed worth a try. A brief listen before its trip through the Vinyl Cleaner did not leave me encouraged—yet its sound *après le bain* was and is nothing short of amazing. The Società Corelli's performance is intense and deliberate, not fluffy and superficial—and the recording, made in Italy, is dry, up-front, and intensely colorful and tactile. This record is worth seeking out.

Again: *Wow*.

There does not exist, in this world or the next, a brush whose bristles can get in there and mix it up with that crap. Period.

Splish Splash

There's a nice passage in *Tune In*, the first volume of *All These Years*, Mark Lewisohn's incomparably exhaustive (and mildly exhausting) three-volume Beatles biography: Pointing to the boys' very humble backgrounds, the author reminds us that, in 1962, 50,000 homes in war-racked, economically depressed Liverpool still lacked bathrooms, and that bathing for those households was limited to one night a week—and to one tub of hot water for all members of the family, one after the other. *Eww*.

That crossed my mind during my first few days with the Audiodesksysteme. Yet my concerns pretty much went down the drain once I understood the Vinyl Cleaner's *hydraulics*, key to which is its efficient electric pump. Once the user presses that little red Start button, and after the Vinyl Cleaner's microprocessor has completed a quick system check—noting, in particular, whether the bottom-level fluid tank is sufficiently full—the pump forces the liquid straight up into the cleaning chamber through a gap at the bottom of said chamber. The volume of fluid is sufficient to assume a level of about 4" above the cleaning-chamber floor, yet in one side of the chamber is a long horizontal opening whose bottom edge is only about 3.75" above that floor. Because the pump continues to work throughout the cleaning cycle, the fluid has no choice but to spill over the bottom edge of that gap, beneath which it flows into a tightly enclosed sponge of white foam measuring 1" by 4" by 6". The sponge filters out contaminants, and the fluid continues down through three holes at the bottom of the filter chamber, where the fluid reenters the tank.

Working in tandem with the pump are those four counter-rotating barrels. Their microfiber pile is, of course, far too big to get into the grooves

Top: The cleaning chamber, viewed from its left, with the microfiber barrels removed from the four upright spindles (foreground). Also visible are the two turnstiles that drive the record and, beyond those, the hollow recess for the ultrasonic transducer. The filter has been removed from the filter chamber (left), the input slot for which is just visible within the cleaning chamber. **Middle:** To drain the storage tank of the Vinyl Cleaner, simply remove the knurled metal plug . . . **Bottom:** . . . then stand back and let nature take over.

PHOTO: ART DUDLEY

"Pangea AC-14SE cables are *magical* in their performance.

Highly recommended product!"

– Jeff M, CO

Pangea AC-14SE fourteen-gauge upgrade power cable has been specifically designed to improve the performance of your source gear.

Pangea AC-14SE is available at the amazing low price of only $49.99/1.0M at audioadvisor.com

PANGEA™

AUDIO

Engineered in USA • www.wsdistributing.com • Distributors invited • ©2014 WS Distributing, LLC

themselves, but serves two other purposes: to clean the outer surfaces of the record—removing, for example, fingerprint oil that didn't make its way into the groove—and to stimulate the fluid into constantly flowing away from both sides of the record, so that contaminants detached from the vinyl are unlikely to become reattached.

That brings to mind two other points. First, the bubbles one sees during the Vinyl Cleaner's cleaning cycle are not cavitation bubbles—those are too small to see with the naked eye—but instead result from the combined hydrodynamic actions of the pump and the counter-rotating barrels. Second, Rainer Gläss designed the Vinyl Cleaner to apply cavitation as briefly and gently as is practically possible. I'm told that it doesn't take long for the ultrasonic generator to loosen caked-on mold-release compound and the like—after which, the machine's major chore is to direct such contaminants as far from the record as possible.

And after *that*, the Vinyl Cleaner's major chore is to dry the record in a similarly noninvasive way, with no penalties in terms of static buildup. Hence the twin drying fans, which blow through openings in the cleaning chamber about 4.5" above its floor—high enough to be safe, but low enough to remind the user never to overfill the Vinyl Cleaner. "Thing bad," as author Mary Roach would say.

Speaking of drains, Audiodesksysteme recommends that the fluid be changed approximately every 100 records; the distributor suggests that same number for dirtier records, adding that, if one tends to wash only new records, it's okay to stretch it to 150. Since I began this little experiment with the filthiest of the filthy, and because I wanted to gauge the Vinyl Cleaner's effectiveness with relatively clean, new records—and to describe in this space the fluid-changing experience—I decided to bail after about 40 or so, and to start all over again with fresh distilled water and a fresh dose of cleaning fluid.

It was almost laughably easy. I unplugged the Vinyl Cleaner from the AC, carried it to the edge of the kitchen sink, removed its knurled metal drain plug—it's fitted with a rubber grommet—and watched as the machine quickly and thoroughly voided itself. I had allotted for the job far more time than it took, so I killed the extra minutes by rinsing in distilled water the filter and the rotating cleaning drums—the latter which are mildly difficult but not impossible to remove and reinstall. The manual recommends rinsing the filter for every 100 records, though it strikes me as easy enough to do every few days; rinsing the drums isn't mentioned anywhere, though the manual does recommend replacing the drums every 500 records. (A set of drums costs $99.95.)

Is it a wash?

My reservations comprise a very short list indeed, topped by the Vinyl Cleaner's lack of adjustable feet. It's easy to see why they were left off—the internal storage tank occupies so much downstairs room that the manufacturer would have to add to the bottom of the machine a plate thick enough to accommodate the threaded axles of such feet—yet the omission is unseemly on so expensive a device.

And I'm a bit suspicious of the soft, rubber-like lips through which the record passes when being loaded into and out of the Vinyl Cleaner. For one thing, after the cleaning cycle is complete, wayward drops of fluid sometimes cling to the lips' undersides, only to be flicked onto the record and record label by the wind from the fans: a rare but nonetheless annoying occurrence. For another, it seems to me that the lips *could* become contaminated with dirt or grit, and their undersides, which exert a mild squeegee effect on each side of an LP, are hard to get at with a cleaning swab. Spare lips are available (I felt dirty writing that) from the distributor, so I assume they're user-replaceable; if so, perhaps the Vinyl Cleaner owner should observe some regimen for their renewal.

Apart from that, my only regret is the price: I regret that I can't afford a Vinyl Cleaner, but I do not consider Audiodesksysteme's price of $4450 regrettable in and of itself. This product is so well thought out, so thoroughly debugged, that I can only imagine that its gestation required more than a few months' work—and probably more like several years. And the Vinyl Cleaner's build quality, like its effectiveness, is beyond reproach. You'd be within your rights to believe that Reiner Gläss applied to the problem of dirty records an unreasonable level of technology (in which case you should, with all haste, set about not buying one); he did it anyway, and you would *not* be within your rights to call the Audiodesksysteme's price unreasonable.

Where does that leave everything else? For a little more than half the price of the Audiodesksysteme Gläss Vinyl Cleaner, you can buy a Keith Monks Audio Labs discOvery One: a wet-wash, vacuum-dry machine that safely cleans dirty records,[5] but not quite as effectively as the Vinyl Cleaner. On the other hand, *all* KMAL machines will clean 7" and 10" as well as 12" discs—an advantage of no small importance to me and other collectors. (I should also say that I've never actually had a problem with static buildup when using KMAL's tonearm-style vacuum wands—though I can't say the same about those vacuum-dry cleaners that evacuate fluid by means of a velvet-lined radial slot.)

By all accounts, the Audiodesksysteme Gläss Vinyl Cleaner has already enjoyed considerable success: with record dealers, music archives, and some of the world's most serious record collectors, not to mention audiophiles of comfortable means who simply want the best. As for myself, I've laid in a good supply of fresh, new Original Master Sleeves from Mobile Fidelity Sound Lab, and I'm trying to clean as many records as I can before the Vinyl Cleaner has to go back to its owners. If there exists a more effective, easy, reliable, and utterly transformative way of cleaning LPs, I have yet to hear it. ■

Art Dudley (art.dudley@sorc.com) makes sure his records are super clean in snowy upstate New York.

5 See this column in the April 2014 issue: www.stereophile.com/content/listening-136.

CONTACTS

Audiodesksysteme Gläss
Seestrasse 1
D 89551 Königsbronn
Germany
Tel./Fax: (49) 07328-7138
Cell: (49) 171-600-1363
Web: www.audiodesksysteme.de

US distributor: Ultra Systems, Inc.
127 Union Square
New Hope, PA 18913
Tel: (215) 862-6570
Fax: (215) 862-4871
Web: www.ultrasystem.com

NIGHTHAWK
AROUND-THE-EAR SEMI-OPEN HEADPHONES
audioquest

AUDIO STREAMS

BY MICHAEL LAVORGNA

THIS ISSUE: ML explores the listening experience and gets lost in Tidal.

Listening for Pleasure

Hi-fi is serious business—at least, for the people whose business is hi-fi. For listeners, among whom I count myself at least some of the time, I'd say that the serious-business aspect of hi-fi is less so. Our sole job, after all, is to enjoy music. The deeper our enjoyment, the richer our experience—and the richer the experience, the deeper our enjoyment. Therein lies the quest: to deepen our enjoyment of music.

Enjoying the reproduction of music is easy. Kids do it. When we play music for children, we typically look for one of a few responses: singing, dancing, or sleep. As we get older, our enjoyment of music becomes more complicated. We also look for an emotional connection: we want to be moved and engaged. I would argue that the quality of the listening experience plays a direct role in this emotional connection—and, further, that this notion of sound quality is entirely subjective. Therein lies the rub.

There's no better way to determine what we enjoy listening to than to *listen*. Just as two people looking at the same scene will see different things about that scene, two people listening to the same music through the same system may very well perceive different aspects of the reproduction. Arguing over these differences in perception is an exercise in futility.

Years ago, I was in a hi-fi store, auditioning two pairs of speakers. At some point in my listening, two new customers came in, also hunting for speakers. After a while, they asked if we could listen to a CD they'd brought with them. It was a disc they'd just recorded: one of the pair was the lead singer, the other was the recording engineer. We played their song first through speakers A, then through speakers B. The singer declared that speakers A captured the recording more faithfully. The engineer felt that speakers B did the better job of reproducing what he'd recorded. Who was right?

They both were. Hi-fi is not a competitive sport, with the same finish line for all participants. Hell, I'd suggest that we're not even all playing in the same stadium. Some people love the sound of tube gear and high-efficiency loudspeakers, others stream music to whole-house systems via WiFi, while still others are content with their favorite headphones and portable player. Some feel that LPs best capture the soul of music, while others feel that vinyl's imperfections—every medium has them—are too intrusive to overlook. The enjoyment of listening to recorded music is a multifaceted endeavor.

The beauty of this intrinsically subjective exercise is the fact that there's no minimal price of admission. You don't have to spend at least x dollars to join the fun, and anyone who says you do is either bragging or trying to keep his or her job. My job as editor of AudioStream.com has me reviewing all manner of digital gear, with a focus on file-based playback. I've reviewed and enjoyed digital-to-analog converters starting at $149 and $189—respectively, AudioQuest's DragonFly and iFi Audio's Micro-iDSD—that can play both PCM and DSD files. Both of these DACs can also power your headphones, or be used to play files through your hi-fi. Both deliver a healthy helping of musical enjoyment.

I've also reviewed, and thoroughly enjoyed, Totaldac's d1-dual, a $12,200 DAC from France. The Totaldac has been one of my favorites so far, offering a supremely musical sound that was a snap to lose myself in. Music eased out of this machine so effortlessly and naturally that listening became a completely immersive experience each and every time. The Totaldac costs 82 times more than the DragonFly, but to ask if it's 82 times better is like asking how much *better* the *Mona Lisa* is than a Rembrandt.

Two people listening to the same music through the same system may very well perceive different aspects of the reproduction.

Quantitative judgments don't apply to subjective experiences—especially where emotions are concerned. If

ML enjoys listening to both the $149 AudioQuest DragonFly and the $12,200 Totaldac.

the Totaldac d1-dual delivers what I find to be a more musically engaging sound, then it does, in fact, deliver more enjoyment than the DragonFly—*to me*. How *much* more is ultimately up to the listener, as is how much it might be worth.

Of course, the accompanying equipment and listening room will play roles in how easily one can hear and fully appreciate sonic distinctions. So, in that way, better reproduction of recordings does come at some expense. And here the trouble begins. When we perceive gains in performance, we also perceive a hierarchy of enjoyment. Even though I enjoyed my old DAC, this new DAC is better. As we invest more time and money in the pursuit of greater and greater enjoyment, we become more vested in our hi-fi

I've met some people who have become so heavily attached to their hi-fis that music has become of secondary importance. Listening to the same few audiophile recordings over and over again is no cynical audiophile cliché. I know—I've met people who play the same audiophile recordings over and over because they highlight those aspects of sound reproduction that those listeners most value. They've lost sight of the purpose of hi-fi, and have begun to value things that to me have no musical value. Some people also make the mistake of believing that their particular preferences are universal values. If you visit hi-fi forums or blogs, you'll see the postings of a subset of audiophiles who believe that their personal preferences and necessarily limited experiences constitute sonic scripture: audio commandments that *everyone* should follow, presumably so that you can be as miserable as they appear to be.

Hi-fi is not about sound. Hi-fi is about music. That may seem painfully obvious, but I would suggest that those who argue about what they perceive to be objective values in hi-fi have lost sight of this simple statement. Sure, we can abstract the listening experience, measuring and comparing how different components reproduce recorded sounds. We have no emotional connection to sounds. Many reviewers—I'm as guilty as the next—tend to dissect the listening experience to the point that they mistake the parts (the sounds) for the whole (the music).

Midrange magic. Deep, tuneful bass. Sweet highs. That's not how we talk about music—it's how we talk about sounds. But this sort of language makes it easy to compare the sounds of different components: how well Component A handles bass compared to Component B, etc. And when comparing components, it also helps to listen to the same music over and over—especially music we're very familiar with. The reference track. No wonder people forget that listening to music is, first and foremost, about music, and not about comparing how different components reproduce sound. We should get back to how we listened as children, and ask a different question: Does this DAC make me want to dance and sing?

Ultimately, we want our hi-fis to make us want to listen more. Ideally, our hi-fis will make us want to explore as much new music as we can, finding joy in discovery, in new voices and new rhythms. If you find yourself listening to the same music over and over, buying mostly audiophile reissues of records you already own, and arguing on forums and blogs about other people's choices in gear, it may be time for a new hi-fi—or a new hobby.

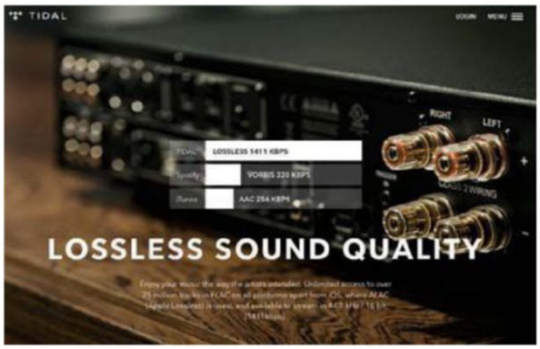
TIDAL LOSSLESS STREAMING

What better way to discover new music than to select from a library of recordings comprising millions of albums in CD-quality sound for a fixed monthly price of $19.99? The Tidal lossless streaming service (www.tidalhifi.com) became available last fall in the US and Canada, and I've been listening to it pretty much every day for the past month or so. My typical listening habits revolve around reading reviews and getting recommendations from friends, then logging in to Tidal and searching for the music I'm interested in. In most cases, the albums I'm looking for are right there. Sweet.

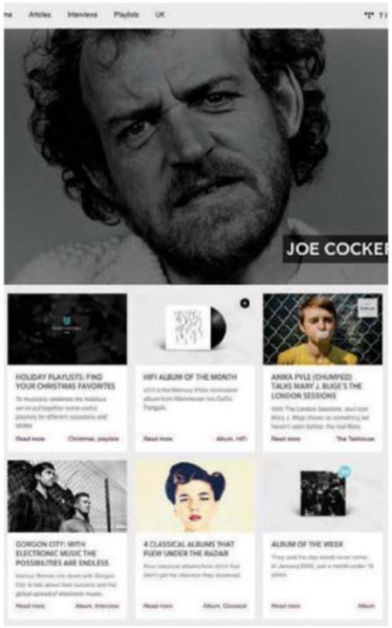
The Tidal interface is simple, and familiar to anyone who's used some sort of computer-based music service. Tidal offers curated Playlists, What's New, Recommended Albums, Top 20 Albums, Favorites (yours), and Playlists (yours). The search engine returns results in an instant. So far, I've discovered a few new favorite albums, including Weyes Blood's *The Innocents*, Richard Dawson's *Nothing Important*, Grouper's *Ruins*, Caribou's *Our Love*, and others.

I've also queued up a bunch of old favorites from the Doors, Tom Waits, Nick Cave and the Bad Seeds, Archie Shepp, Don Cherry, Jimmy Scott, Jimi Hendrix, Einstürzende Neubauten, and more. The way I figure, I'd have spent more money buying all of the music I've listened to on Tidal—and then some—than I have on the monthly fee. Tidal claims to have over

The Best Hi-Fi is the one that's used to discover and enjoy music most often.



Tidal's website offers significant editorial comment.



Do not have a NAS drive?
Just plug your USB Disk and play!

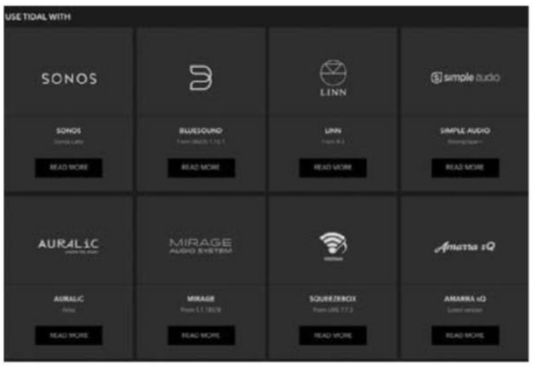
No disk size limitation
Read all major partition formats
Drive USB HDD without external PSU

ARIES

Wireless Streaming Bridge

AURALIC LIMITED | 声韵音响
1F Building No7, 1A Chaoqian Road, Beijing, 102200, China
12208 NE 104th St. Vancouver, WA 98682, United States
http://www.auralic.com/ info@auralic.com
TEL: +86-(0)10-57325784 (CN) TEL: +1-(360) 326-8879 (US)

AURALiC®
inspire the music



What better way to discover new music than to select from a library of recordings comprising millions of albums in CD-quality sound for a fixed monthly price of $19.99?

An increasing number of hardware manufacturers are offering support for Tidal.

25 million tracks in its library, and the number grows each week—my explorations can continue practically unabated.

You can listen to Tidal in a number of ways, including through a Web browser (currently, the Compact Disc's resolution of 16-bit/44.1kHz is supported only by Google Chrome), through Tidal's desktop app, or via the mobile app for iOS and Android devices. I've pretty much stuck to the desktop app, and the sound quality of their lossless streaming is about as good as playing music from my NAS devices. One nice feature of the mobile app is the ability to listen to your selections Offline: the songs are downloaded to your device for local playback, saving you data charges.

Setting up the Tidal desktop app is relatively simple. Click on the System icon in the upper-right corner of the screen, and select Sound Quality (HiFi) and your Sound Output Device (your DAC). You're ready to roll. I used Tidal through my desktop system—a Mytek Digital Stereo192-DSD DAC and a pair of Adam A3X powered speakers—as well as through my main system: a MacBook Pro laptop, Auralic Vega DAC, Pass INT-30A integrated amplifier, and DeVore Fidelity The Nine speakers. I find Tidal's lossless streaming to be on a par with CD-quality sources, which means I can listen, explore, and enjoy for as long as time allows.

As you listen, the Tidal app also displays Related Artists, which I've come to appreciate as another way to discover new music. Again, having direct access to millions of albums in CD-quality sound leaves me little to complain about. Tidal has signed deals with a number of audio manufacturers—including Bluesound, Linn, Auralic, and Electrocompaniet—to make their service available with the purchase of a supported device.

The Best Hi-Fi . . .

. . . is the one that's used to discover and enjoy music most often. Musical enjoyment is something to be shared and cherished. To turn this hobby into a catfight over whose big rig is best is a travesty brought about by a few misguided misanthropes.

The absolute sound turns out to be the one that's in our heads. Also rattling around in there—as with every other form of enjoyment—each of us has his or her preferences and favorites. Instead of arguing, we should be endlessly thankful that we can afford the time simply to listen to music. This luxury is the most valuable means to our end, which is . . . enjoyment.

Stating the obvious seldom changes anything. Some people will go on arguing about hi-fi. Some people will go on doing lots of other things. Yes, hi-fi is a serious business—but let's try to remember that enjoying music through a hi-fi is serious *fun*. ■

Michael Lavorgna (michael.lavorgna@audiostream.com) is the editor of AudioStream.com, a website for all things computer audio.

Join the Audio Revolution

SUPER HiREZ™

DSD Downloads & More — Your One-Stop Download Shop

Don't Miss Out On The Best Sounding Downloads!

Frank Sinatra
Close To You

Frank Sinatra
Come Fly With Me

Frank Sinatra
In The Wee Small Hours

Frank Sinatra
Sinatra and Swingin' Brass

Frank Sinatra
This Is Sinatra

Simon & Garfunkel
Bookends

Simon & Garfunkel
Bridge Over Troubled Water

Simon & Garfunkel
Greatest Hits

Simon & Garfunkel
Parsley, Sage, Rosemary and Thyme

Simon & Garfunkel
Sounds Of Silence

Sam Cooke
Portrait Of A Legend
1951-1964

Shelby Lynne
Just A Little Lovin'

Various Artists
Jazz At The Pawnshop

DiMeola, McLaughlin & DeLucia
Friday Night In San Francisco

Stan Getz & Joao Gilberto
Getz/Gilberto

Steely Dan
Gaucho

The Alan Parson Project
I Robot

Norah Jones
Come Away With Me

Led Zeppelin
Houses Of Holy

Led Zeppelin
IV

The World's Largest Selection Of Audiophile Recordings

ACOUSTICSOUNDS.COM | SUPERHIREZ.COM | 800.716.3553

MUSIC IN THE ROUND

BY KALMAN RUBINSON

THIS ISSUE: KR auditions DigiBit's Aria music server and Sharp's SD-WH1000U wireless high-resolution audio player.

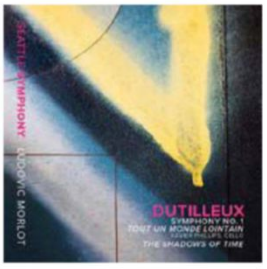
Going Multichannel with Downloads

It seems that the rising popularity of downloading of music files is going to affect not only the distribution of high-resolution recordings but also the availability of multichannel recordings. Once freed from the technical, marketing, and distribution constraints of physical media, large hi-rez and/or multichannel files can more easily be made available. The established providers of music downloads, such as Acoustic Sounds, HDtracks, and iTrax in the US, are being joined by: sites that specialize in particular genres of music, such as the Classical Shop (UK); other sites, that focus on particular formats, such as Native DSD Music (Netherlands) and the Promates Music Store (DXD files, Denmark); and music producers, such as Blue Coast Music and the Boston Symphony Orchestra (BSO.org), that offer their work directly to listeners.

Its small size means that this market benefits even more from being liberated from physical media. An important example of this is that, with the appointment of Andris Nelsons as its new conductor, the Boston Symphony Orchestra has released his first recording with them on CD, but is offering on their website other formats, including 24-bit/88.2kHz FLAC (5-channel). This concert recording of Sibelius's Symphony 2 and Wagner's *Tannhäuser Overture* will probably not be released on SACD or Blu-ray Disc because of the market's smallness, but it's available as a download (www.bso.org/merchandise/listing).

The Seattle Symphony Orchestra has taken a similar approach with an interesting and ambitious series under its new music director, Ludovic Morlot. So far, their half-dozen releases range from familiar to new music, and the latter are most exciting. I was particularly impressed with the music, performance, and sound of their recordings of music of Raskatov, Stravinsky, and Dutilleux; the last was nominated for Grammys for Best Orchestral Performance, Best Classical Instrumental Solo (by cellist Xavier Phillips), and Best Engineered Performance. These are available as CDs, as well as 24/96 FLAC downloads (http://recordings.seattlesymphony.org/recordings).

I've had experience with four music servers that support multichannel music files. The first was Oppo's BDP-105 or BDP-103, which opened the doors to multichannel DSD playback for many of us and continue to be viable options.[1] There are significant limitations in the Oppos' interfaces with remote files via the network in terms of metadata, graphics, and sorting, and some users prefer sorting their files onto smaller drives connected directly to these players' USB ports. I've also worked with servers based on a fanless PC and on a stock Mac mini, using JRiver Media Center and a few other software players. These offer more options and, depending on the software used, widely ranging views and facilities with my NAS-based storage. Most recently, I used (and bought) a Baetis XR2, a PC-based media server with many hardware and software customizations that made use and performance extremely satisfying.[2] The only drawbacks to these three computer-based servers are related to their advantages. The user has complete control over included components and installed software, but that means the user also has the responsibility to maintain everything, as well as the power to mess it up. Baetis provides some insulation from the latter by preparing and testing the system, preconfiguring JRiver software, and providing excellent documentation as well as Internet support.



This spectacular multichannel Grammy-nominated recording of Henri Dutilleux's Symphony No. 1, Tout un monde lointain, and The Shadows of Time was recorded live on March 19, 2014 by the Seattle Symphony with Ludovic Morlot, conductor and Xavier Phillips, cello.

But the audio world is clearly split between fans of computer-based servers and those who want a preconfigured, prepackaged device dedicated to the single task of playing music. For the latter camp, the only options have been the Oppos, which also play discs and offer streaming services. The multichannel world needed a dedicated multichannel music player.

1 See my review in the July 2013 issue: www.stereophile.com/content/music-round-61.

2 See my review in the September 2014 issue: www.stereophile.com/content/music-round-68-page-2.

DIGIBIT ARIA MUSIC SERVER

Enter DigiBit's Aria music server. DigiBit has been in the server business since 2008, and the debuts of its Aria and Aria Mini, and the Aria Kit for the Oppo BDP-105 and BDP-105D, mark the company's entrance to the hardware business. But when I went to their website, I found no mention of the playback of multichannel files, which was curious—the Oppos, after all, can do this. I was told that *all* Arias can play multichannel files. I passed on the Aria Kit, which requires an Oppo BDP-105D for DSD64 and DSD128, and I have only a BDP-105. I got an Aria without DAC because the DAC option is two-channel only, and I wanted to use the Aria's USB output for multichannel.

The Aria is impressively beautiful and solid. It looks like a stack of staggered, brushed-aluminum slabs interleaved with black areas. The fanless design, by the Spanish firm of Ochoa and Diaz-Llanos, is handsome and absolutely rigid, and requires no vents to disturb the lines, which sweep around the sides to frame the front and rear panels. The front panel has only an on/off button, a disc drawer, and an open/close button. (DAC-equipped versions have a small window for a one-line display.) The rear panel has, in order from right to left, an IEC socket for AC, a power switch, LAN (RJ-45), USB (HDD) input and outputs, AES/EBU, S/PDIF BNC, S/PDIF RCA, and I²S (RJ-45).

Inside, my review sample of the Aria had: an N2600 64-bit processor running the Windows Home Server OS; 2GB of RAM; a 32GB solid-state drive (SSD) for the operating system, preloaded files, and programs; a linear power supply; and a 2TB hard-disk drive (HDD). I was surprised at the inclusion of the HDD—but other than when I put my ear directly on its case, the Aria was absolutely silent. The programs include heavily customized versions of JRiver and dBpoweramp as well as proprietary software. Also included are a simple, one-page startup guide and a concise owner's manual. Configured as described above, the Aria costs $6995. The options include: no internal HDD, a 4TB HDD, or a 2TB SSD; and/or a PCM-DXD (32-bit/352kHz) DAC with DSD64 and DSD128. A linear power supply is standard on all Arias sold in the US.

I connected the Aria to my home network and its S/PDIF output to the coax input on my exaSound e28 DAC, and powered it up. Then, from the Apple store, I downloaded to my iPad Aria's iAria app, which quickly found the Aria. A single finger tap later, I was playing music!

The entire process, from plugging in the first connector to the sound of music, took about 10 minutes, and required not a single glance at the manual. In fact, one can operate this system, with all its sophistication, simply by exploring the options in the iAria app. As a longtime user of JRiver Media Center, I could easily see the family resemblance, but DigiBit has set up JRMC in ways so inviting, useful, and intuitive that it's a model for all JRiver users to aspire to.

In addition, the iAria app automates the importing of files in either of two ways. First, it can import files from a USB or NAS device to its internal hard drive. Conveniently, iAria monitors how much of the HDD is used, but ultimately, even a 4TB disk won't suffice for hi-rez multichannel files, many of which run between 5 and 10GB each. iAria's second method offers the option of linking to the Aria's

library individual files, directories of files, or an entire drive. This process was remarkably fast; using up to five Internet databases, including DigiBit's own Sonata DB classical database, the Aria gathers cover art and metadata (18 fields are the default). Within minutes, the added files, with full links to views of artists, albums, and genres, have been fully integrated into the library. The user can then compile multiple playlists, or add individual items to existing playlists. I can do this with JRiver, but not nearly so effortlessly.

Ripping discs, too, is painless. As a result of the close relationship between DigiBit and software provider Illustrate (www.dbpoweramp.com), the Aria makes use of dBpoweramp and RipNAS to make CD ripping automatic. Just put a CD in the Aria's drive and close the tray. That's it. The file—in FLAC, AIFF, or WAV format—and all associated metadata are on the Aria's HDD and in your library in minutes. If you want it somewhere else—say, on a remote computer or NAS—all the ripped files are in a shared folder accessible from any device on your network.

What about multichannel? Just as with DigiBit's website, the Aria's documentation makes no mention of multichannel, but that's okay—the Aria handles multichannel files with the same facility as it does two-channel. The only difference is that you need to ask DigiBit to install the appropriate ASIO driver for your device. As far as I know, the list of such devices is short, and currently limited to the exaSound e28.[3] I e-mailed DigiBit to request the exaSound ASIO driver, and was told to leave the Aria powered up and connected to the Internet. When I looked at it the next morning, there was my e28 on the list of available devices. As far as the files themselves were concerned, the Aria handled them transparently: Play a stereo file, get stereo. Play a multichannel file, get multichannel. I played multichannel FLAC, WAV, DSF, DFF, DXD, and even ISO files. But the Aria's built-in ripper won't rip multichannel discs. Damn.

I downloaded to my iPad Aria's iAria app . . . a single finger tap later, I was playing music!

It's getting hard to discern differences among file servers, so long as their processing is fast enough to ensure that the data get to the DAC on time and unchanged—unless, of course, you want to apply some sort of processing, such as upsampling or format conversion. A file server should be the equivalent of a "straight wire with gain" or a straight data pipe. With the exaSound e28 DAC, the Aria sounded just marvelous. At no time were there any unwanted noises, not at file initiation, not between tracks, and not when the format changed. The sound's impact and immediacy were advances on the same files played through the Oppo, but that might have been due to differences between the Oppo and exaSound DACs, as well as processor speed.

In fact, the Aria music server was beyond criticism. My only complaints are about the absence of things that DigiBit seems to have intentionally excluded. First, unlike the plain-vanilla implementations of JRiver Media Center, the user can't reprogram how music formats are handled and pro-

3 See my review in the November 2013 issue: www.stereophile.com/content/music-round-63-page-2.

25 Years
Cables, yes, and so much more!
Components / Accessories / Essentials!

Ask about the award-winning, fully automatic, ultrasonic Vinyl Cleaner
Power Line Products & AC Cables
Dozens of Line Filters, Legions of AC Cables available for in-home audition!

Supreme Fuse from HiFi-Tuning: 99% Silver + 1% Gold = 100% State of the Art
Room Acoustics and Resonance Control
HFT ECT

"HFT" and "ECT" treatments can seriously upgrade both your room and electronics. Money back satisfaction guaranteed!
Hi End Headphone Library

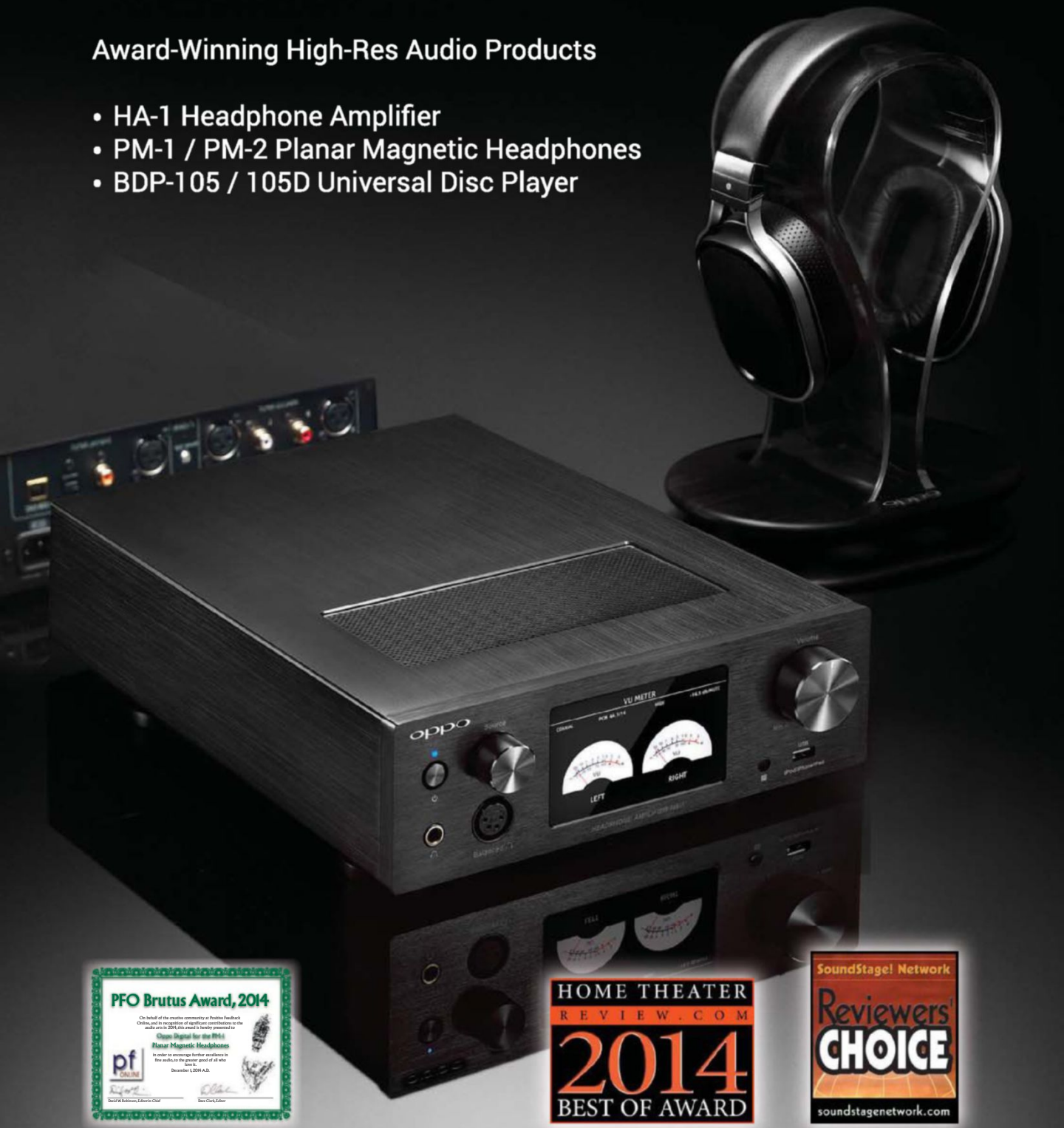
Compare top headphones at home in your own system for performance and comfort
THE CABLE COMPANY
Good people. Good advice. Great systems, one customer at a time.
125 Union Square • New Hope, PA 18938 • 1.800.FATWYRE • 215.862.4870
Email: cable@thecableco.com • www.thecableco.com
All major credit cards • Free consultation • Most orders ship free!

oppo

@oppodigital

Award-Winning High-Res Audio Products

- HA-1 Headphone Amplifier
- PM-1 / PM-2 Planar Magnetic Headphones
- BDP-105 / 105D Universal Disc Player



HOME THEATER REVIEW.COM 2014 BEST OF AWARD

SoundStage! Network Reviewers' CHOICE soundstagenetwork.com

OPPO Digital, Inc. | (650) 961-1118 | www.oppodigital.com | Mountain View, CA

cessed. Only DigiBit can do this, and in my case, they had to. The review unit arrived with a default setup that upsampled all formats to DSD128 for USB. Some people recommend this, but not all DACs can accept DSD128, and not everyone wants it. The e28 makes glorious two-channel music with DSD128 output, but the Aria stuttered when I switched to multichannel: I got bursts of sound from the front L/R speakers, nothing from the others. DigiBit removed the default upsampling, and all was well for bit rates up to 352.8kHz! I suspect that the Aria's highly efficient N2600 processor was pushed to its limits by a task that's handily dealt with by the i5 and i7 CPUs used in modern PCs,

A related matter is that the Aria user can't introduce other software or add-ons to the system. The Aria runs so well, does its tasks so smoothly, and sounds so good that this is mostly a good thing. However, I think that good room equalization is almost a necessity these days, and there's no way to implement that with the Aria, nor am I confident that the N2600 could handle the additional workload.

But all that is tangential to DigiBit's goals for the Aria music server. Designed to be a straightforward music player, it is a delight to use and makes no compromise in sound quality. Fundamentally, the Aria's sound was as satisfying as that of other high-quality, computer-based servers—but unlike them, the Aria's design, and a user interface so sophisticated that it's simple, make it plug-and-play with network expandability.

SHARP ELECTRONICS SD-WH1000U WIRELESS HIGH RESOLUTION AUDIO PLAYER

In June 2014, Sharp Electronics showed and demonstrated prototypes of these components at CE Week, in New York City. I thought they were the highlights of that show,[4] and pestered Sharp to send me samples for review. Recently, a very large rolling suitcase arrived. It contained a SD-WH1000U Wireless High Resolution Audio universal disc player ($4995), two VR-WR100U Wireless Bridges ($999 each), and all ancillary devices and cables. In most cases, this would be a reviewer's dream—everything I needed was provided—but the limitation of having only two Bridges was a disappointment. Still, I was excited to at last get my hands on these babies.

There's no shortage of universal players out there. What makes the Sharp SD-WH1000U special is that it's one of the first serious audio/video products to incorporate the WiSA protocol for wireless speakers. I've been following this technology since it was a hand-wired circuit board, and it always seemed the answer to the need for wires all over the place in a multichannel system.[5] Not all homes are easily retrofitted with in-wall wiring, and folks like me end up trying to hide all the cables cluttering our listening rooms. WiSA provides a stable, high-resolution, wireless link for systems with up to 7.1 speakers, and supports calibration of speaker distance and delay.[6] In some systems, including those with Sharp's VR-WR100U Wireless Bridges, WiSA also supports individual channel EQ.

That's not to say that WiSA is the Sharps' only attractive feature. At CE Week, I was also told that the SD-WH1000U's USB and Ethernet inputs would support hi-rez audio, including DSD and multichannel. In addition, its multiple HDMI inputs and other connections meant that the SD-WH1000U could be the only electronic device in a system: Just add powered speakers.

The Sharp SD-WH1000U is an impressive package as a universal player as well as the entire central electronics for a multi-input, multichannel audio system.

The SD-WH1000U impressed me as soon as I hoisted its 27.6 lbs out of its foam nest and placed it on my rack. It sits on four hefty, pointed feet with nonmarring tips. Inside its sturdy case, each of the larger components—*eg*, the disc transport and the R-core power transformer—is mounted on its own base, and everything I saw indicated that Sharp has spared little expense to ensure that the SD-WH1000U will be taken seriously by serious audiophiles (*eg*, high-spec, 32-bit ESS Audio ES90185 DAC chips are used).

When first powered up, the SD-WH1000U searches for WiSA-compatible speakers. I bypassed that and immediately connected it, with a pair of XLR cables, to my Audio Research MP1 multichannel preamplifier, popped in Hans Vonk and the St. Louis Symphony's recording of Messiaen's *Turangalîla Symphony* (CD, PentaTone PTC 5186 320), and sat down. Wow! The sound quality of this massive work was positively sterling, and as clear and detailed as I have ever heard it from a CD. As a simple CD player, the SD-WH1000U more than made the grade.

But this was just the beginning. From the Sharp suitcase I retrieved the two VR-WR100U Wireless Bridges and Sharp's WiHD transmitter. The latter enables wireless connection wireless transmission of the HDMI output to a remote display, which I didn't try. (The SD-WH1000U has its own WiSA transmitter for audio.) I connected the Bridges to the L and R inputs of my McIntosh MC-303 three-channel power amplifier with XLR cables. The Bridges, too, are impressively

4 See www.stereophile.com/content/hi-res-audio-and-more-2014-ce-week.

5 See www.stereophile.com/news/cedia_2009_day_three. See my comments below the Aperion photo.

6 See www.stereophile.com/content/one-touch-151the-beosound-essence.

JERRY RASKIN'S
NEEDLEDOCTOR
Established 1979

WWW.NEEDLEDOCTOR.COM

DYNAMIC, TRANSPARENT, & PROFOUNDLY MUSICAL

ROGUE AUDIO SPHINX INTEGRATED AMPLIFIER

ONLY $1295.00 (Available in Black or Silver)

Dynamic, transparent, and profoundly musical, the **ROGUE SPHINX** sets a new standard in affordable integrated amplifiers. Utilizing Rogue's most advanced designs, the Sphinx is able to outperform separates costing far more than this single box design. And with 100 watts of hybrid power, this integrated is capable of realistic volume levels that will rival the clarity and presence of the original performance.

2013 the absolute sound PRODUCT OF THE YEAR AWARDS

2014 the absolute sound Editors' Choice Awards

ENTIRELY BUILT AND DESIGNED IN THE USA

ROGUE AUDIO'S GEAR IS ENTIRELY DESIGNED AND HAND-BUILT IN THE USA

ROGUE AUDIO
PHARAOH INTEGRATED AMP
$3,495

ROGUE AUDIO CRONUS MAGNUM
INTEGRATED AMP
$2,295

ROGUE AUDIO PERSEUS MAGNUM LINE/
PHONO PREAMP
$2,195

ROGUE AUDIO STEREO 100
POWER AMP
$3,495

ROGUE AUDIO ARES PHONO PREAMP
$1,995

ROGUE AUDIO ATLAS POWER AMP
$1,995

ND

Toll Free 800.229.0644 | **Phone** 612.378.0543 | **Fax** 612.378.9024
Email info@NeedleDoctor.com | 6006 Excelsior Blvd., St. Louis Park, MN 55416

WORLD'S LARGEST SELECTION
OF TURNTABLES, CARTRIDGES, AND NEEDLES!

constructed, weighing nearly 9 lbs each; they mediate 24/96 audio output via XLR and RCA analog outputs.

I rebooted the SD-WH1000U and let it search for the Bridges. Within a minute, it had connected to both Bridges, and I used its OSD to identify them as the left and right front speakers. Back to *Turangalîla*, and guess what—it sounded identical to the direct wired connection through the ARC MP1, except that the volume could now be controlled via the Sharp player. Based on this simple comparison, I believe that the Bridges' DACs are the same ESS chips as those in SD-WH1000U, and that the WiSA wireless transmission is entirely transparent. Good news.

I played around with audio files on USB drives and from my remote NAS, both of which the SD-WH1000U had no trouble accessing. Again, the sonic results were entirely satisfying—in stereo. It was only when I attempted to play multichannel discs or files that I hit a brick wall. Apparently, the SD-WH1000U can output to the wireless Bridges and WiSA-compatible wireless speakers, or it can output to HDMI—but not to both at the same time. I'd hoped to run a hybrid setup with the front L and R speakers wireless and the other channels via HDMI and an external processor, but this is not possible as the Sharp is currently configured. The options are to get four more Bridges or use just the HDMI to explore the SD-WH1000U's multichannel performance.

But that, too, was a disappointment. Whether connected to the HDMI input of the Oppo BDP-105, the Meridian HD621/Reference 861, or the Marantz AV8801, all I could get was two-channel stereo. Strangely, the Sharp's OSD properly indicated the format of the source (*eg*, DSD 5.1), but the receiving devices always indicated that they were getting only stereo. Even stranger was the discovery that the Sharp offered effective speaker-setup options for WiSA but none at all for the other outputs. It seems that with only stereo WiSA outputs available, the HDMI outputs were similarly constrained.

A home visit from a Sharp technician confirmed all this. He agreed that being able to use HDMI and WiHD at the same time would provide a logical upgrade path from one to the other. Sharp has offered to get me additional Bridges, and to discuss this the engineers in Japan for comment and, hopefully, resolution. For all the tantalizing promise of the Sharp SD-WH1000U, I regard it as still a work in progress. I will report on that progress in due time. ■

Kalman Rubinson (STletters@sorc.com) combines a career teaching neurobiology with shuttling between surround-sound–outfitted homes in Manhattan and Connecticut.

CONTACTS

DigiBit
Calle de Asura 81
28043 Madrid
Spain
Tel: (34) 91-533-42-50
Web: www.digibit.es

US distributor: Source Systems, Ltd.
San Clemente, CA 92672-6000
Tel./Fax: (949) 369-7729
Web: www.sourcesystemsltd.com

Sharp Electronics
Tel: (800) 237-4277
Web: www.sharpusa.com

XB

A REVOLUTION ORCHESTRATED BY ESTELON

Estelon XB $35,900.

The new Estelon XB is a revolutionary high-performance loudspeaker. Hand-crafted using a proprietary, patented marble-based composite which eliminates all cabinet coloration, the XB will open your eyes (and ears) to an unimaginable level of fidelity.

Combining stunning aesthetics and uncompromising sound quality, the new XB utilizes highly advanced custom-made ceramic drivers to deliver unrivalled speed, accuracy and resolution, for a musical performance that is without equal.

Retaining the hallmarks of the Estelon sonic signature, wide imaging, a deep soundstage and thrilling dynamics, the XB sets a new standard amongst high-performance loudspeakers.

Distributed in North America by
BLUEBIRD MUSIC LIMITED

Contact us for your closest dealer:
sales@bluebirdmusic.com
www.bluebirdmusic.com
tel: 416.638.8207

www.estelon.com

estelon
from Alfred e Pastucci

GRAMOPHONE DREAMS

BY HERBERT REICHERT

THIS ISSUE: This one's for devotees of the classic Technics SL-1200MK2 DJ turntable.

. . . with the Pioneer PLX-1000 turntable

Before I moved to the boat, I lived in a big old firehouse with a shiny brass pole and a red door. The fire engines were gone but it was still a boy-toy pilgrimage site. The first thing one noticed on entering was a red 356 Porsche coupe. Behind it was a black '32 Ford hot rod with a flat-head V8 and triple Strombergs. Behind that was a 1939 Lincoln convertible from some *Godfather* movie. On the second floor . . .

It was Saturday night, and I was making a soirée demonstration of some new tractrix horn loudspeakers driven by 5W single-ended amps. I had two turntables: a borrowed Linn LP12 with an Ittok arm and a Koetsu Rosewood Signature cartridge, and my own Denon DP-3000 with matching Denon DL-103 cartridge. Partway through my demo, I switched from the LP12 to the DP-3000.

Half of my audience got up and walked into the kitchen—not because they were hungry or thirsty, but because, to their minds, it was insane enough I was playing horns ("Can't you *hear* those horn colorations?") and a 5W amp ("There's no loudspeakers for those!"), but . . . a direct-drive turntable? These seasoned audiophiles knew better than to hang around for *that* kind of tomfoolery. "Can't you hear the cogging?" "What about that hunt-and-peck servo?" Frowns, wrinkled brows, mutterings. "All that motor noise . . . and, and it's made in *Japan*!"

My mad little protests were tiny compared to the decades-long chorus of audio reviewers and European turntable manufacturers telling audiophiles that direct-drive motor/platter/servo assemblies produce mechanical noise—chattering—that corrupts the still, black silences of the recording. They said that the servo violated the musical flow. I say that's all bunk.

In my view, high-end audio is not now, and never really was, about creating or assessing gear with the sound of live music as a reference. It's about manufacturers, engineers, and journalists (like me) talking self-serving, evangelistic, messianic crap. (Hold on—someone just threw a rock through my window.) Audio is really about staunchly held beliefs; most people can't remember where they got those beliefs, or why they believe them. Forget analog *vs* digital or tubes *vs* solid-state; the most pervasive and poorly considered belief of all is that only belt-drive turntables are worthy of audiophile consideration.

Had any of those believers ever actually compared a direct-drive, rim-drive, or idler-drive turntable to their belt-driven model, they'd have realized that each of these technologies presents music with varying amounts of force, weight, and forward momentum. A human voice, an electric guitar, or a piano—all sound more or less real with the best of each type. But do you know which type best reproduces the scale, impact, and dynamic presence of live music? Direct drive.

It says "Pioneer," but the PLX-1000 closely resembles the classic Technics SL-1200MK2.

Don't believe me? Be brave and try Pioneer's PLX-1000 direct-drive record player, introduced in August 2014. It costs only $699, complete with tonearm. But be forewarned: The PLX-1000 has no audiophile approval rating. If you require an audiophile-endorsed direct-drive, you'll have to spend a little more and try the Brinkmann Audio Bardo ($9490 without arm), or the Grand Prix Audio Monaco ($19,500 without arm), or the truly unassailable VPI Classic Direct Drive ($30,000 with arm)—all of which have been reviewed in *Stereophile*.

A little backstory . . .

One fun night in 1968, at New York City's Salvation II nightclub, MC Francis Grasso put on a pair of headphones and, using his Thorens TD 124 turntable, began "slip-cueing" and "beat-matching" one dance record into another. The DJ revolution had begun.

In 1969, in an attempt to break into the radio broadcast market, Technics introduced the first direct-drive turntable, the SP-10. The following year, Technics added the beautiful SL-1100. DJs gravitated to both models because their rugged high-torque motors allowed almost instant pushbutton startup of a pre-cued musical selection. Sensing even larger

As part of our new **3rd Avenue Collection**, the **TM3** loudspeaker delivers the kind of pure, superbly accurate sound that enthusiasts have come to expect from **THIEL Audio**. Engineered for greater performance and reliability whether for music or movie soundtracks, it immerses you in the moment like never before.

Learn more at THIELaudio.com.

THIEL
AUDIO

ARRIVE. HEAR.

potentials in the professional and consumer markets, in 1972 Technics introduced the SL-1200, and in 1978 the much-improved SL-1200MK2.

In 1972, most hi-fi enthusiasts were using the Dual 1019, the AR XA, or the more upscale Thorens TD 150 belt-drive tables. That same year, Ivor Tiefenbrun introduced the now legendary Linn Sondek LP12. If I remember correctly, in 1972, *Stereophile*'s founder, J. Gordon Holt, was using an idler-drive Garrard 301 in his reference system—just as our venerable Editor at Large, Art Dudley, uses now.

Despite strong protests, Technics discontinued the SL-1200MK2 in 2010. During its 38-year life, the SL-1200 completely dominated the broadcast, DJ, and turntablist markets. More than 3 million were sold, but only a few audiophiles ever gave it a thought.

Description

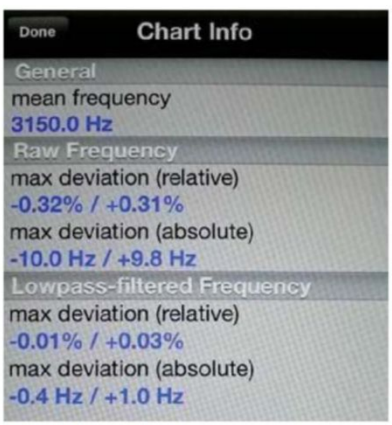
Pioneer's new PLX-1000 was engineered to fill the still-significant need for a professional-quality turntable designed for playing records in clubs, and durable enough to be hauled around in the back of a van and dropped on the ground. The PLX-1000 looks and is laid out like the iconic Technics machine. Why? Because Pioneer correctly assumed that seasoned DJs would want a 'table that "fell into the hands" like the pro-quality tool they'd been using for decades.

Pioneer has made a few subtle but (I think) important improvements over the SL-1200MK2. They've made the PLX-1000's power cord detachable. They've added gold-plated RCA jacks and a sturdy ground-wire post, instead of the Technics's captive cables. (Who likes schlepping a turntable with a bunch of dangling wires?) Hoping for even quieter playback, Pioneer has added 1.15 lbs' worth of damping to the plinth and rubber-damped the tonearm. (The PLX-1000 weighs 28.9 lbs) The new three-phase, brushless DC motor has more than twice the torque of the old Technics motor. Startup time is 0.3 second! (It was 0.7s for the Technics.)

Pioneer has changed the red lights to blue, and added a little well at the back to store a second headshell with cartridge. And as a sort of personal touch, Pioneer has replaced the Technics's square on/off button with a more elegant, blue-lit, round one.

With the PLX-1000's platter removed, I could see that its motor mounts and interior construction were completely different from (but possibly sturdier and more serviceable than) those of the venerable Technics machine. Musically and mechanically, the new PLX-1000 seems more heavy-duty and sure-footed than the vintage, near-mint SL-1200MK2 I borrowed for comparisons.

Like the SL-1200, the PLX-1000 was engineered for putting on and taking off records, and using it was akin to driving a good sports car. Everything "handled" with assurance. Installing and aligning the cartridge, setting the vertical tracking force (VTF) and antiskate force, and especially setting the vertical tracking angle (VTA), were easier and more stress-free than with any other analog front-end I've used. This is the only turntable I know of that is designed to let you change records in complete darkness.



Pretty good measured performance, says the Dr. Feickert app.

Listening

In honor of the Pioneer PLX-1000's roots, I began my review with some first-class electropunk dance music from New York's own Fischerspooner. I played the 45rpm remix (Junkie XL) of their 2002 hit, "Emerge" (Capital Y 7243 8 77886), using a Shure M44-7 cartridge. This DJ cartridge has been popular for so long because it's indestructible, and plays music with agile and muscular authority. The combo of PLX-1000 and M44-7 played the Fischerspooner and every EDM disc I tried with athletic, fast-moving bass, sweet but rolled-off highs, and that weighty, stimulating midrange energy that opens people's eyes, penetrates their bloodstreams, and gets 'em up and out on the dance floor. Unfortunately, the average audiophile is not likely to appreciate the strong points of the venerable Shure M44-7, a keep-the-line-moving, feel-good kind of cartridge. Those of you with fancy moving-coils will likely find it unsubtle, unrefined, and lacking in tonal purity. I would, of course, have no choice but to agree.

Not to mention that the M44-7 is so strong in its presentation that it upstaged any hope of my getting to know the PLX-1000 and how it might perform in a more *intimate* context. Imagine trying to get friendly with a sexy French film star. You don't ask her if she wants to come home and play Xbox. Instead, you smile in French and say, *Avez-vous lu Simone de Beauvoir?* Then take her to New York's Bouley restaurant and order some Château Cheval Blanc (1961?). I had to apply similar maneuvers to get intimate with the PLX-1000.

I couldn't afford Château Lyra (2010?), but seeking heightened romance and more understated charm, I installed my low-output, low compliance, Zu-modified Denon DL-103 Mk.II cartridge in the PLX-1000. While I was at it, I gave the Pioneer's arm bearings a quick check and discovered they were way loose. Turntable guru Mike Trei was in the house, so I let him do the honors; in short order we fine-tuned and triple-checked the bearings on the Pioneer, on my SME 3009, and on my VPI Traveler.

Just for fun, we played Steve Guttenberg's original pressing, bought in 1965, of *Beatles for Sale* (LP, Parlophone PCS 3062) on the belt-drive VPI Traveler ($1199) with an Ortofon 2M Black cartridge ($799), *and* on the Pioneer PLX-1000 with the Zu DL-103 ($519). Normally, the Ortofon, with its sensitive nude Shibata stylus, is a very refined, uncolored, low-distortion cartridge; and normally, the Zu DL-103, with its conical stylus, is a looser, more colorful, but more generalized-sounding cartridge. Today, those roles were reversed. Bass through the Traveler was slightly woolly and puffy, while bass through the Pioneer felt controlled, tuneful, and detailed. (I'm certain much of this difference can be attributed to the Pioneer's superior vibration isolation on my extremely rigid equipment rack.) The VPI's midrange sounded more recessed and dark than the brighter,

AUDIOPHILE ESSENTIALS
Audiophile Essentials Editor's Choice CD package: includes Recommended Components Collector's Edition + Editor's Choice CD: only $15.
Audiophile Essentials Test CD package: includes Recommended Components Collector's Edition + Test CD Vol. 1,2,3: only $30.
GET INTO HIGH-FIDELITY.
stereophile
shop.stereophile.com
YOUR AUDIO AUTHORITY

more focused sound of the PLX-1000. During this comparison, the VPI had the most refined, enjoyable top octaves, while the Pioneer the most realistic bottom octaves. Overall, the Pioneer's eager, smiling handshake made the VPI seem a little shy and dutiful.

Comparing past to present

Next, we replaced the VPI with Mike Trei's like-new Technics SL-1200MK2 and played a bunch of records using only the Zu Denon cartridge and the excellent Schiit Audio Mani phono stage ($129), designed by Mike Moffat. Out of curiosity, we used Dr. Feickert Analogue's *Adjust*+ test record and iPhone app to measure the speed accuracy of the SL-1200M2 and PLX-1000. Both 'tables performed better than their published specifications.

With every LP, I thought the vintage Technics presented music with a more colorful and exciting midrange energy. The best words I can think of to describe the SL-1200's midrange are *bubbly* and Champagne-colored! In contrast, the Pioneer's midrange was distinctly seltzer colored, but more transparent and detailed. The Technics's soundstage was wider and higher, but the Pioneer's soundstage was deeper and better articulated. The PLX-1000 sounded less resonant, more damped, and better controlled, and instrumental timbres were slightly lean to spot-on. Comparing these two record players was starting to remind me of those old tubes-vs-solid-state clichés. Until I got this wild idea.

I took the thicker Technics platter mat and put it on the Pioneer's platter, and the thinner Pioneer mat on the Technics. You won't believe what happened. That champagne midrange moved over from the Technics to the Pioneer, and a tighter, more damped sound emerged from the Technics.

The song on *Beatles for Sale* that I always gravitate to is Ringo's cover of Carl Perkins's "Honey Don't." Ringo is my favorite Beatle. His songs always have a simple, rock-a-bye swing, and "Honey Don't" is one of the best-ever "pace, timing, foot-tapping, fist-pumping, boogie-factor" tracks. Everyone present agreed: "Honey Don't" moved and bopped better on the Technics. But after I swapped mats, it bopped better on the Pioneer. It seems that a big part of that legendary SL-1200 midrange energy was generated by the mat/record interface—not the turntable.

Mike had also brought along a Herbie's Way Excellent mat of rubbery foam. It made the PLX-1000's sound a tiny bit softer, quieter, and more sophisticated. With the Herbie mat, the PLX-1000 played classical and vintage jazz records with a seductive, easygoing manner. The top five octaves became sweeter and more relaxed—more like the VPI Traveler, which also has a rubber mat.

When the Beatles first appeared, I thought they were for dorks and nerdy girls. But when a kind someone loaned me the new *The Beatles in Mono* (14 LPs, Apple 6337971). I had no choice but to use the $699 Pioneer PLX-1000 equipped with the $2800 Miyabi Mono cartridge to play every disc all the way through. Man oh man, what a fun time that was! These dorky recordings took me right back to my checkered past and put me in my black Chevelle—smoking reefer and drinking Boone's Farm with my pimple-faced, kleptomaniac girlfriend. Simultaneously, I began to finally recognize how beautiful and sophisticated these compositions are. This well-crafted boxed set is one of the few LP reissues I can proudly recommend.

After tripping with Lucy down Penny Lane, I installed the Soundsmith Carmen moving-iron cartridge ($799.95) and matching MMP3 phono stage ($649.95) and returned to my Béla Bartók obsession. Almost instantly, I became hypnotized by Pinchas Zukerman playing Bartók's Violin Concerto, with Zubin Mehta and the Los Angeles Philharmonic (LP, Columbia Masterworks 35156). This music, composed in 1938, is way more psychedelic than any of those moptop ditties. It is also fiendishly difficult for any record-playing system to navigate. I was shocked. The Pioneer PLX-1000 with Soundsmith cartridge sorted out every note, every startling dynamic swing, every weighty slam, every shift in sonority, better than I had ever experienced in my current Bed-Sty

CONTACTS

Pioneer Electronics (USA), Inc.
1925 E. Dominguez Street
Long Beach, CA 90810
Tel: (800) 421-1404
Fax: (310) 952-2990
Web: www.pioneerelectronics.com.

monk's cell. This Bartók record forced me to drink full cups of Pioneer (and Soundsmith) Kool-Aid. Right now, I'm listening to Zukerman's virtuosity bow its way through that first movement (*Allegro non troppo*), and I'm sitting limp, stunned, and slack-jawed. How can a so-called DJ 'table be sorting out *this* type of ultrachromatic sophistication?

Alone again

When my buddies left, the first thing I discovered was: When a group of audio aficionados such as I and Mike and Steve Guttenberg start comparing this component to that and listening in that judgmental audiophile way, the results are only marginally valid. The best way for me to evaluate audio gear is to listen long and lovingly—until I get the itch to change something. Even though I keep doing it, I believe that listening critically to how something "sounds" is a nonmusical act that, in terms of "Will this component make me happy?," is nearly always irrelevant. Seeking to avoid that irrelevance, I tried to forget about the PLX-1000 and just enjoy playing records—until I got restless and began wondering how the brand-new Pioneer would compare with my ancient (idler drive) Thorens TD 124.

Right now, I wish I could say something like, "The Pioneer was good, but not quite as good as my reference TD 124." But I can't. Both 'tables actively disarmed my critical facilities and let me focus on the music—which is the main reason I like them. My expertly restored Thorens was obviously noisier than the Pioneer, but even so, it seemed less noticeable in the reproduction chain than the PLX-1000. Meanwhile, the Pioneer added an extra clear octave each of bass and treble that made every record sound richer, more open, and alive. The Pioneer's added frequency extension let me look deeper into musical soundscapes. The Thorens plays jazz sax and solo piano with edifying aplomb, while the Pioneer played orchestral strings and kettledrums with disarming authority. And so on and so on . . .

Speaking in words

I am struggling to find the words to describe one extremely subtle but, I think, important aspect of the Pioneer's musical presentation. Compared to the best belt-drive turntables, the Pioneer PLX-1000 emitted a barely perceptible *forced weightiness*. I had to listen *very* carefully to hear this. The effect was like a nervous *unsuppleness* that pushed ever so lightly against my consciousness while music was playing. I've noticed this forced weightiness with almost every direct-drive turntable—except maybe old Mitchell A. Cotter's B-1, the Victor (JVC) TT-101, and the new VPI. Could *this* be what those belt-drive fanatics are complaining about?

But wait! Before all you überperceptive rubber-band practitioners get too cocky, I should point out that belt-driven 'tables have their own variant of this subtle phenomenon. To my ears, all but the most elite belt-drives surround the musical flow with an unmistakable, vacuous, hollow, unnaturally relaxed, *false emptiness* that reminds me of an uncomfortable silence in a romantic conversation. This false emptiness can also feel slightly *off the beat*.

The beauty of the better rim-drive and idler-drive models is that they possess a more Zen-like forward momentum that avoids both of these colorations.

Conclusions

During those soirée demonstrations back in the firehouse, I would attempt to disable opposing technocentric audiophile belief systems with a simple statement: "Everything sounds like what it is made of." I still believe this declaration.

Yes, people, the Pioneer PLX-1000 plays music like a high-torque direct-drive record-playing machine. That is why I enjoyed it so much. It gave tangible force and soulful energy to pop, R&B, jazz, and electronica. Belts can't touch the PLX-1000's excitement, naturally formed detail, and clearly expressed forward momentum. And who could have imagined? This new Pioneer also showcases the complex tonal character and elegant structures of classical music better than any affordable belt-drive I've experienced. So . . .

That's me you see, standing on my Bed-Sty stoop, waving my hands and entreating you: "Give up your prejudices! You have nothing to lose but your dried-out ol' rubber bands!" Pioneer's new PLX-1000 is not only a worthy successor to the legendary Technics SL-1200MK2, it is a serious contender for the best audiophile-grade turntable for less than $2000. Unabashedly recommended. ■

1+1
Do the Math
"Many expensive high-end loudspeakers would kill for this kind of midrange performance."
Robert Harley
The Absolute Sound, issue 246, Oct - '14
GOLDEN EAR the absolute sound 2014 AWARDS
2015 the absolute sound Editors' Choice Awards

ClairAudient 1+1
Personal Reference Monitor
• NO crossover + NO disparate drivers = NO phase anomalies
• Full range drivers = smooth frequency transition
• Powerful dual gap motor = ULTRA low distortion
• POINT source = ULTRA pristine soundstage
• 12mm excursion = Highly dynamic
• Bi-pole design = NO baffle step
Every great performance deserves an audience.
audience
audience-av.com
(760) 471-0202 (800) 565-4390

VANDERSTEEN

introducing the Model Seven Mk II

The Best Just Got Better

Praise for the Original Model Seven

Best of Show CES 2014

" … the hairs on the back of my neck stood up, so powerfully physical was the presence of the singer in the room… musically perfect across the board!"

–John Atkinson

Best of Show T.H.E. Newport 2014

"… by Saturday the system was pulling into the competition as a Best of Show contender, sounding vivid and very dynamic. By Sunday, this had become one of a handful of rooms that were hard to leave."

–Dennis Davis

Best of Show New York Audio Show 2014

"…The sound was stunningly live and musical …Peerless."

–Alan Taffel

More Open, More Refined, 100% Vandersteen vandersteen.com • 559-582-0324 • made in the USA

Audio Alternative Fort Collins, CO 970 221 1496 audioalternative.com	Audio Alternative Atlanta, GA 770 931 0606 audiovideohifiatlanta.com	Audio Connection Verona, NJ 973 239 1799 audioconnect.com	Don Better Audio Shaker Heights, OH 216 375 1393 donbetteraudio.com	Optimal Enchantment Santa Monica, CA 310 393 4434 optimalenchantment.com	Tone Studio Indianapolis, IN 317 423 3050 tonestudioav.com

Space is the Place

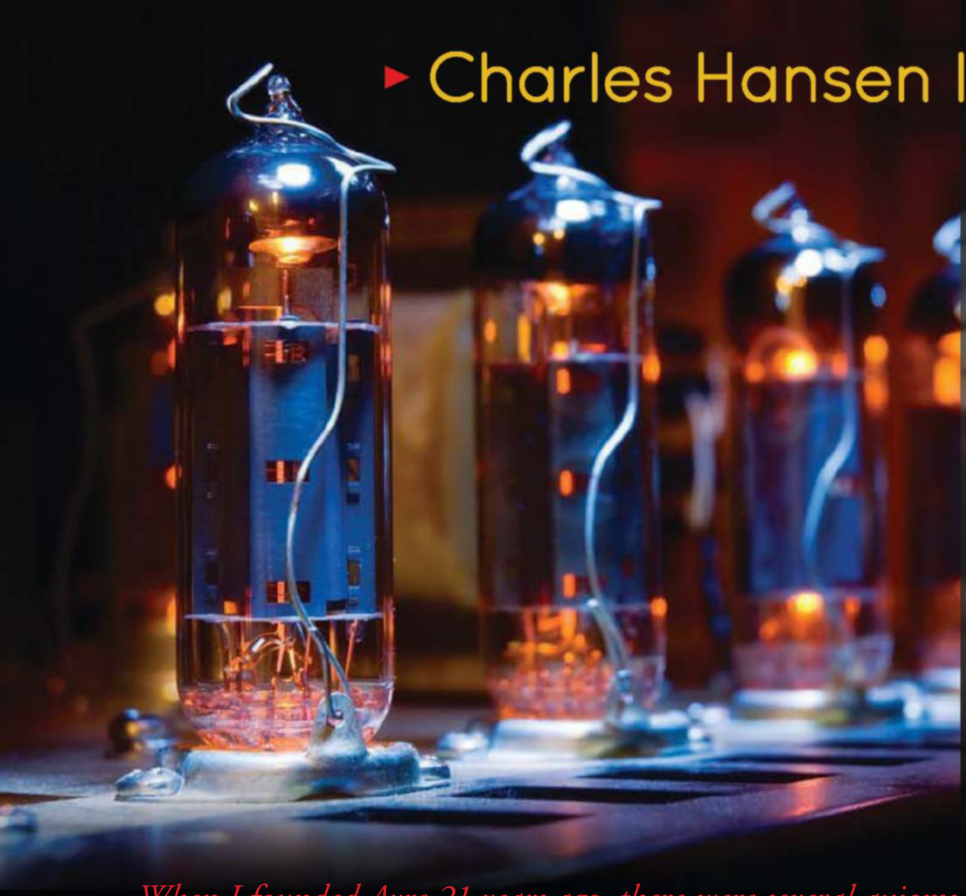
Mark Turner's Lathe of Heaven

by **ROBERT BAIRD**

THESE DAYS when Mark Turner leads his quartet, there are actually five instruments on stage. Along with trumpeter Avishai Cohen, bassist Joe Martin, and drummer Marcus Gilmore, there's a fifth instrument you can hear but not see. It's invisible. It's called space.

"I agree with that," Turner says between bites of waffle in the kitchen of his home in Brooklyn's Prospect Lefferts Garden neighborhood, where his two dogs keep a wary eye on this visitor from Park Slope. "Some of it happens, but also I definitely write it in. The most obvious examples are when the rhythm section drops out in some of the tunes—like in "Brother Sister 2," it happens quite a bit. Totally open space, one instrument at a time. It brings nakedness; it brings tenderness, but nakedness in a harsh way too. Either you hate it or you like it. It can make you very uncomfortable as a listener. But it can also bring you in. It brings things to the front immediately [*slaps table*]—like what's happening!"

Down the hill and a bit to the north, in Prospect Heights, bassist Joe Martin also mentions the space in the quartet's new record, *Lathe of Heaven* (ECM). "It's not like we have to suddenly compensate for the fact that there's this missing person, or this missing voice. We're embracing that," he says. "There is this space, and it's part of the sound, too. I have to curtail myself—don't



Charles Hansen loves tubes...

"The KX-R Twenty is as good as a preamplifier can get."

— John Atkinson, *Stereophile*

"It stands to reason that if Ayre Acoustics' original KX-R was the best preamp I'd ever had in my system, and the KX-R Twenty is even better, then the KX-R Twenty is the new 'best preamp I've ever heard.' It is."

— Jeff Fritz, *SoundStage!*

Twenty

When I founded Ayre 21 years ago, there were several axioms that we adopted as givens:

- *Rule One:* We would only design and build products that we wanted to own ourselves.
- *Rule Two:* There are already too many products with precious little to differentiate them. Every Ayre design *must* have radical innovations, ideas that had *never* been done before.
- *Rule Three:* The goal was to build kit that gave the same sense of involvement, musicality, and life to the music that a great tube design does.

Though I still loved the way that tubes presented the musical experience, I had come to that point in my life where I simply didn't have the time for them any more. Once it had been fun to "roll" tubes and experiment with them. Now I had a business to run and a family. Life had changed and I simply had no time for tubes. While creating great tubed electronics would have been fun and easy, it would have violated Ayre's Rule Number One.

Our first product fit all of the criteria of Ayre's philosophy. Yet no experienced listener would ever mistake it for a tubed amplifier. But with each new generation, we came closer to our elusive goal, step-by-step, while preserving the musicality and listenability of tubes.

With the Twenty series (to celebrate our 20th anniversary), we have actually surpassed our original goal from Rule Number Three. For the first time ever, we have created pure solid-state designs that actually sound better than the best tubed equipment I have ever heard.

That is a bold claim, and one that you have probably heard before. But I invite you to visit your Ayre dealer and listen for yourself. Better yet, arrange to audition an Ayre Twenty series product in your own home, in your own system, with the music that you love.

Because with the Ayre Twenty series, you no longer hear solid-state. You no longer hear tubes. You just hear that which we all love so much—music.

— Charlie Hansen

Ayre

www.ayre.com • 303.442.7300 • Boulder, Colorado

Brooklyn in the House! The Mark Turner Quartet: (left to right): Joe Martin, Mark Turner, Marcus Gilmore, Avishai Cohen.

overplay, don't try and fill in—but at the same time try to figure out how I create my part within this vocabulary. And within these compositions, what works and what doesn't, what's too much, what's too little, and just being like . . . 'Yeah, this is good.'"

The other thing that distinguishes Turner's band, which has been together on and off for the past few years, is that, unlike most jazz ensembles, it contains no chordal instrument—no piano or guitar. At the record-release party for *Lathe of Heaven*, held in Manhattan, at the Jazz Standard, in November 2014, the lack of chords not only added spaciousness, it made each player's voicings and soloing more prominent, and gave the tunes an undeniably unique architecture. Turner's interweaving of instruments—and the quiet, the . . . space—make for a very distinct style of jazz composition.

"All jazz music is chamber music, anyway," Turner says, "but there's more of a chamber-music feeling to it without the piano, more like a wind ensemble. There's a lot of precision to it. And it's pristine, which kind of assumes something is light and precious. But at the same point [in this music] there's something totally opposite: It's also very raw and tense, especially if you have a rhythm section like Joe and Marcus. The intensity of the rhythm section helps to balance out the preciousness."

With a chordal instrument in the band, Turner says, "The piano kind of smooths everything out. There's a blanket for the harmony to lay on, and everything is a little less intense. It definitely gives you freedom, but you always get opposites. You get freedom, but you also have more responsibility, all the things that come with taking an instrument away—trios, even more; duos, even more so; solos, the ultimate."

"I think Mark wanted to explore writing in this context," Martin says, "and make it as whole from the writing side as possible so that it's not missing anything." An Iowa transplant who's been in New York for 20 years, Martin has also recorded as a leader, most recently in 2009, with *Not By Chance* (Anzic). "I think he has a very strong vision for what he's doing, and it's unique. Obviously, there are many recordings where there's not a chordal instrument—people talk about Ornette Coleman—and that's all valid, but I think, from the compositional side, the way he's writing, I think it's very personal to Mark's pen, and that it will be kind of new repertoire to go into the canon."

Lathe of Heaven is just the latest installment in the 49-year-old tenor player's distinguished career. Born in Ohio but raised in southern California, he attended Berklee College of Music, in Boston, before decamping for New York City in 1990. Here he worked with pianist Brad Mehldau, and built quite a recording career as a sideman, appearing on records by Lee Konitz, Joshua Redman, Enrico Rava, Billy Hart, Omer Avital, and many others. *Lathe of Heaven*, Turner's eighth album as a leader, is his first since 2001. He spent the years between raising a family in the ever-safer, ever-hipper confines of Brooklyn.

Lathe of Heaven is named for a science-fiction novel by Ursula K. Le Guin. "I'm a science-fiction fan. The title track and the name of the record are based on this novel where, basically, this guy dreams, and all his dreams become reality. Every morning, the world is different. Sometimes it's a little thing, like there's a picture on the wall that changes. Other times the entire paradigm changes: there are two moons instead of one, aliens come, all kinds of stuff. The thing about science fiction is you have to build a viable world in order to construct a story. So that's the thing about this record. The world we live in—reality, or whatever you want to call it—is not as solid as we think. It's always changing. It's a constant flow. Things are impermanent, and we're affecting the universe all the time. Every decision you make. Let's say someone has a dream, things they want to do in the future; if you stick to it, you can make them real. It's metaphysical, or magic, or something."

Nearly as magical is Turner's seemingly effortless ability to slip between sideman and leader and back again, taking what's positive and useful to him from each role. "Being a sideman is very good for your head," he says, nodding and chuckling at the apparent obviousness of the statement. "I mean, all you have to deal with is music. You can totally get into the craft. It keeps you limber, keeps you on your toes,

GTT's Award Winning Systems

Bring *The Performance* Home

Hailey

YG ACOUSTICS
HIGH-TECH HIGH-END LOUDSPEAKERS

Sonja 1.2

gttaudio.com

GTT AUDIO & VIDEO

908.850.3092

Grimm Audio LS1

audionet MAX

Kronos Audio Sparta

keeps you in shape. If you're playing with a lot of different bands, it keeps your reading chops going. You have to interpret different music—something that might be really straight ahead, really free, a combination of both, straight eight, swing, whatever it is. You have to interpret all these things and also keep your own identity, but really give it up to the music . . . and those are kind of opposites. So being a sideman is a great workout.

"My reason for being a leader is totally practical. There are certain things I can do as a leader that I can't do as a sideman. Honing my compositional abilities—I'd like to become a better composer. I need the deadlines of, 'Okay, I need to have these tunes done,' and think about types of bands, instrumentation."

Turner's latest appearance on record as a sideman—on trumpeter Tom Harrell's *Trip*—was particularly compelling for both him and for listeners. "I first heard Tom when I was in high school, from this bootleg tape. I think it was with Horace Silver. I was completely drawn to him from then on. The things that I enjoyed about him are the things that I look for in music myself. It's great to play with someone who's an older version of someone I would like to be, you know. [*laughs*] He doesn't waste any notes. He leaves space. He pays attention to details. I think he's a wise person and a wise musician. He can captivate someone with one or two notes, like Miles. That's it! You know it's him. You're drawn in without drama—he can bring the drama, but you don't need it. He basically pulls you in with content, placement, melody, and swing, and to me, that's the shit. That's what I'm looking for. So it's great I get to play with a mentor.

While he can easily captivate an audience with a minimal number of notes, Turner's playing is also often instantly distinguishable for his great skill and feel for the altissimo, a woodwind instrument's uppermost register.

"When I was starting play in the upper register, I started to hear things there, and I wanted to play melodies and lines that were a little bit more from the European classical realm, but still keeping my foot in the African-American diasporic rhythmic tradition. And because I started on clarinet, and it's higher. I also love classical saxophone, and those guys all play in the altissimo. And I wanted to be able to play piano-like lines. Pianos have a very large range, so in order to access a bit of it, I had to start to play in the upper register. I like the sonority of it. I like the challenge of control, of being able to keep the range of the instrument more or less uniform, all the way into the altissimo. And I like to try and keep the saxophone in the woodwind realm. Sonically, that requires a certain woodiness and darkness to the sound."

Some of Turner's tone comes from listening to his tenor-sax heroes, particularly Warne Marsh and John Coltrane. "Trane was the first one, and probably the saxophone player I spent the most time with. And when I say the most time with, I mean I transcribed him a lot, and also played transcriptions that other people did, and played the records. I played a lot of his solos. If you can't study with someone, or sit next to them as an apprentice, transcriptions are the closest thing to having the master take you by the hand and say, 'This is how you play the music.' The important thing is your reflection of them, and that's you, actually. You learn to find yourself through other people. Like a martial artist does: You practice the form until you transcend the form.

"So Trane was the one I spent the longest with, from the first recordings with Miles to *Interstellar Space*. I take him, in many ways, as a template for the way I would like to learn. He was a relentless learner. I take him as an inspiration, as someone who was willing to try and go beyond his inherent abilities. I know, for me, I have to. I'm not very talented. I just love jazz and music and I just want to learn it. He seemed to always be looking inside and saying, 'How can I make this different, better?' Trane is harmony, specificity, swing, the blues, compositions, intensity, and pacing. Pacing is a big one with him. He had a plan. And then, of course . . . there's his sound."

As for Turner's sound, *Lathe of Heaven* was recorded at Avatar Studios, on Manhattan's West Side, by James Farber and ECM's owner, founder, and continuing inspiration, the formidable, indomitable Manfred Eicher. Turner smiles, but, like most ECM artists I've spoken with, is politic when discussing his label.

"I like to hear the instruments as natural as possible. I like a certain amount of clarity. I like it when the recordings have a thickness to them, a density. I don't like it to be too dry. This record has more reverb than I would normally want, but I actually like it because it reminds me of the way that ECM records sounded in the '70s. Like a lot of records in the '60s did, too—Miles records, for example. The sound of this record reminds me of Don Cherry's *Old and New Dreams* and Keith Jarrett's European quartet. The reverb fills out the quartet sound and makes the band sound bigger, which is cool."

Joe Martin, sitting on the futon in his music/kids/TV room, says, "Manfred uses James Farber to engineer most of the recordings he does in New York, and James Farber, for me, is one of the best, if not the best. He's my preferred engineer because he just knows how to get a great sound out of all the instruments. He gets a great bass sound. I have complete faith in what he's doing. You can just bypass the worrying about how the sound is to just getting as much into the music as possible. Manfred has his concept of how . . . *reverb* is the word that comes to mind, because he has an idea of how it's gonna sound, and it's very detailed, very thought out. ECM is an iconic label; an experience beyond the sonic thing. He really creates something special. I feel very honored to have had the experience to be on one of those records."

Lathe of Heaven is a very carefully constructed set—too careful, perhaps, for those who prefer more blowing, more freeform interplay. "I know there are certain people who feel that it's very cerebral music," Turner says. "Personally, I think there's something for everyone in the music world, and not everyone is gonna like what you do, and that's fine. It *should* be that way. But I do think it's odd—that [criticism] kind of assumes that you were able to get into the mind and heart of the person and know whether they are feeling or not. I think it says more about the person listening to the music than about the music itself. It just means you don't relate to it, or you confuse emotion with being gregarious, or something like that."

Or with being a big, aggressive, ostentatious tenor player?

"Yeah, you can be that way and not feel it at all. I know plenty of people that will do [that] and, after a gig, they're like, 'Man, I'm glad that shit is done!' And the audience is like [*Turner's voice grows louder*] 'Oh my God, I felt so much!!!'" ■

LARRY GREENHILL

Theta Digital Prometheus

MONOBLOCK POWER AMPLIFIER

Several seconds after I began listening to it, I knew that Theta Digital's Prometheus monoblock amplifier ($12,000/pair) was different from other amplifiers. The violins and brass were more dynamic, and had more pace. The orchestra sounded more three-dimensional, depicted in relief by a degree of hall ambience I hadn't heard when I played the same recording through my reference solid-state stereo amplifier, a Mark Levinson No.334.

I've experienced other such "revelations" on first hearing a new audio component. Sometimes this first impression is accurate, as with the unique transparency of Day Sequerra's Reference FM tuner. Sometimes it's misleading, such as the strong room lock in the bass response with pedal notes of pipe organs I heard through Escalante Design's Fremont loudspeakers—and later discovered was a serious coloration that troubled higher-frequency sources like voices and piano.

My first impression of the Theta was all the more interesting to me because the Prometheus has a class-D output section. In his review of MBL's Corona C15 class-D monoblock, John Atkinson noted that the "unique selling propositions of a class-D amplifier are that it is efficient, lightweight, and inexpensive."[1] In his review of Anthem Statement's M1 class-D monoblock, Kalman Rubinson wrote that "everyone acknowledges the advantages of the [class-D] technology in terms of efficiency and ecological benevolence, but so far, neither has captured the souls of aficionados who demand cutting-edge sound regardless of the cost, whether in dollars or degrees."[2] Although the MBL Corona C15 ($24,000/pair) won JA's qualified praise, other class-D monoblocks have not fared so well, including the relatively inexpensive Anthem Statement M1 ($6998/pair) and the cost-no-object Mark Levinson No.53 ($50,000/pair).[3]

Theta Digital & the Hypex Ncore NC1200 amplifier

Because class-D amplifiers generate high levels of ultrasonic and RF energy, such designs typically employ a passive low-pass filter between their output devices and output terminals. This filter needs to be tuned to a single load impedance. Speakers that have a different impedance may cause the amplifier to prematurely roll off the top octave—or, much worse, the filter's maximum effect peaks above the audioband.

To address this problem, in 2001, while working at Philips, Dutch engineer Bruno Putzeys developed a class-D output stage as a cheap drop-in replacement for linear amplifiers. "What Bruno did," Jeff Hipps, marketing director of Theta Digital told me, was to find "a way to include [the] load in the filter circuit." As a result, this amplifier design, which Putzeys dubbed Universal class-D (UcD), was "completely load agnostic [because its] frequency response is load invariant." The UcD, with its six-transistor comparator circuit, served as the basis of the more developed Linear Analog Switching Amplifier (LASA) output-circuit modules found in MBL's Corona C15 amplifier.

Later, while working at Hypex, Putzeys developed a second-generation design, the Ncore, in which the six transistors of the UcD's comparator circuit grew to 10. Putzeys named his new amplifier circuit the NC1200 because its maximum power rating is 1200W into 2 ohms. It is said to achieve 93% efficiency at full power, has a 38A output current capability, comfortably handles 98V rail voltages, and employs extensive, microprocessor-controlled error protection. It is faster and handles smaller signals than

1 *Stereophile*, June 2014; www.stereophile.com/content/mbl-corona-c15-monoblock-power-amplifier.

2 *Stereophile*, December 2012; www.stereophile.com/content/anthem-statement-m1-monoblock-power-amplifier.

3 Reviewed by Michael Fremer in *Stereophile*, December 2012; www.stereophile.com/content/mark-levinson-no53-reference-monoblock-power-amplifier.

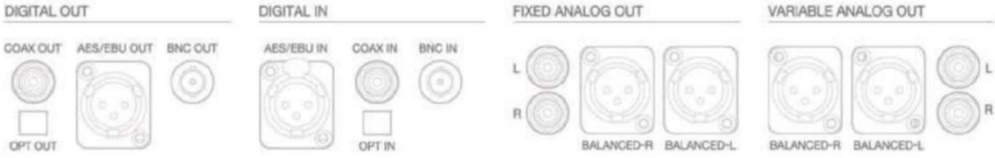
SPECIFICATIONS

Description Solid-state monoblock power amplifier. Inputs: single-ended (RCA), balanced (XLR). Outputs: 2 pairs Cardas binding posts. Output power (20Hz–20kHz, 0.01% THD+N): 250W into 8 ohms (24dBW), 500W into 4 ohms (24dBW), 850W into 2 ohms (23.24dBW). Frequency response: 20Hz–20kHz at 300Wpc, +0/–0.5dB. Input impedance: 47k ohms. Output impedance: 0.05 ohm, 20Hz–20kHz. Damping factor: 2500 (minimum), 20Hz–20kHz. Input sensitivity: 130mV for 2.83V output, 1.825V for full output. Signal/noise: 124dB, A-weighted. Voltage gain: 27.8dB. Power consumption: 1W at standby, <40W idle, 1200W driven maximum (950W into 2 ohms). **Dimensions** 13.5" (346mm) H by 9" (230mm) W by 19.8" (508mm) D. Weight: 54.5 lbs (24.8kg) net, 64 lbs (29.1kg) shipping. **Finishes** Platinum, Ebony. **Serial numbers of units reviewed** 050085 (L), 050021 (R). **Price** $6000 each. Approximate number of dealers: 57. Warranty: 5 years, transferrable. **Manufacturer** Theta Digital/ATI, 1749 Chapin Road, Montebello, CA 90640. Tel: (323) 278-0001. Fax: (323) 278-0083. Web: www.thetadigital.com.

ERIC SWANSON

THETA
Prometheus
Class D Power Amplifier
PROTECT
STANDBY

- PERFECT CD-RIPPING
- SSD(MAX. 4TB, RAID 0/5)
- BUILT-IN BATTERY
- PCM TO DSD
- DLNA(DMS, DMC, DMR)
- METAL BODY
- 214[W] x 243[H] x 238[D] mm
  8.42 x 9.56 x 9.37 inch /11.4kg



Astell&Kern

www.AstellnKern.com

the UcD controller, and uses what Putzeys calls "higher order control loops."[4] Interestingly, the loop gain throughout the audioband never drops below 53dB. The NC1200's improved comparator circuit matches the output to the input, and a control loop circuit allows more open-loop gain thus a greater amount of feedback. It was designed, Putzeys wrote, to "have essentially frequency-independent distortion with 32dB loop gain from DC to 20kHz."

Theta Digital combined Putzeys's Ncore NC1200 class-D module with a linear power supply created by Theta's David Reich. Much of the weight of each Prometheus monoblock's 54.5 lbs comes from its 1.44kVA toroidal power transformer. Theta rates the amplifier's harmonic distortion at less than 0.01% at 500W RMS full-band into a 4 ohm load. Hipps was quick to point out that, at <0.001%, the Prometheus's total harmonic distortion plus noise (THD+N) at 1W is lower than it is at full power by a factor of 10. The Prometheus's output impedance is also extremely low, meaning that its damping factor is higher than is usually the case with a conventional class-D design.

Description

The Theta Prometheus is the shape and size of a small desktop tower computer and measures 13.5" high by 9" wide by 19.8" deep. The curved front panel is of aluminum, with a small built-in handle; the side panels have screened cutouts to dissipate heat. Unlike most monoblocks, the front panel is narrow and the case is deep.

The amplifier is manufactured in mirrored pairs: the handle is on the right side of the faceplate of the left-channel unit, and vice versa. However, there's no reason not to reverse the amps' positions in your room.

You press the single button on the front panel to exit Standby mode (in which the Prometheus draws less than 1W from the wall and its Standby LED glows red) and enter operational mode (the LED glows green, then blue).

The Prometheus is specified as outputting 250W into 8 ohms, 500W into 4 ohms, or 850W into 2 ohms.

A second LED will turn red if the amplifier exceeds its maximum operating temperature.

On the rear panel is a column of connectors. At the top are single-ended RCA and balanced XLR input jacks, separated by a toggle switch for selecting between them. Below these are two Cardas speaker binding posts, for use in biwiring. There is also a jack for the standby remote trigger. The Prometheus can be turned on remotely with a 5–12VDC signal. Below this, toward the bottom, is the Main Power switch, which connects AC to all circuits. Flipping this on illuminates yellow Standby LED on the front panel. Below that is a fuse bay, and at the bottom is an IEC inlet for the detachable AC power cord.

The Prometheus is specified as outputting 250W into 8 ohms, 500W into 4 ohms, or 850W into 2 ohms.

Sound

The two Theta Digital Prometheuses were easily unpacked. I attached balanced interconnects to their inputs, and the spade lugs of my PSC speaker cables to their binding posts, then flipped the Main Power switch on. As always, I used *Stereophile*'s *Test CD 2* to ensure that the channel assignments and phase were correct.

I listened to the Thetas for seven months, alternating them with a Mark Levinson No.334 and a pair of MBL Corona C15s, the latter supplied by JA, who has them on long-term loan. The amplifiers drove my Quad ESL-989

4 This and subsequent quote: Bruno Putzeys, "Ncore Technology White Paper" (Hypex Electronics: February 2, 2012); www.hypex.nl/docs/papers/ncore%20wp.pdf.

MEASUREMENTS

I performed a full set of measurements using Audio Precision SYS2722 system (see www.ap.com and the January 2008 "As We See It," www.stereophile.com/content/measurements-maps-precision). As the Theta Prometheus has a switching output stage that produces ultrasonic noise that would overload the Audio Precision's input circuitry, I carried out most of the tests using, ahead of the analyzer, an Audio Precision AUX-0025 passive low-pass filter (see http://ap.com/products/accessories/aux0100). Usually, before measuring an amplifier, I run it for an hour at one-third power into 8 ohms—the most thermally stressful condition for a class-B output stage. But as the Prometheus has a class-D output, that preconditioning is irrelevant. Even so, I subjected serial number 050085 to this test to ensure that it had settled into its long-term operating condition. (The chassis was slightly warm at the end of this period.)

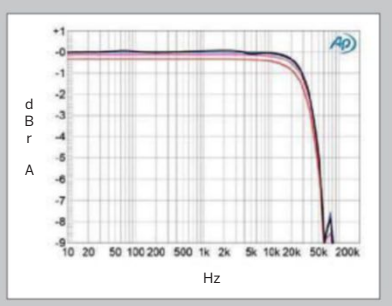


Fig.1 Theta Prometheus, frequency response at 2.83V into: simulated loudspeaker load (gray), 8 ohms (blue), 4 ohms (magenta), 2 ohms (red) (1dB/vertical div.).

The Theta's voltage gain into 8 ohms was the same, at 27.7dB, for its balanced and unbalanced inputs, and the amplifier preserved absolute polarity for both inputs (*ie*, was non-inverting); its XLR jack is wired with pin 2 hot. At 90k ohms, the balanced input impedance was very close to the specification of 94k ohms at low and middle frequencies, though it dropped to 84k ohms at the top of the audioband. The unbalanced input impedance was half these values.

The Prometheus's output impedance was 0.11 ohm at 20Hz and 1kHz, rising slightly at 20kHz to 0.13 ohm. The modification of the Theta's frequency response, which results from the interaction between this impedance and the impedance of our standard simulated loudspeaker, was very low (fig.1, gray trace). This graph also shows that the ultrasonic rolloff doesn't change significantly as the load impedance drops to 2 ohms, with a -3dB point of 40kHz. However, a small peak at 77kHz becomes a little more pronounced into higher impedances. Without

JERRY RASKIN'S NEEDLEDOCTOR

Established 1979

WWW.NEEDLEDOCTOR.COM

ALL NEW RESONANCE OPTIMIZED EBONY

NEW CLEARAUDIO MAESTRO V2 EBONY

ONLY $1200.00

"As musical as they come, the **MAESTRO V2 EBONY** should be required listening for moving-magnet and moving-coil fans alike"

"Clearaudio has crafted a better cartridge from every sonic perspective."

- NEIL GADER, The Absolute Sound
40th Anniversary Issue, July 2013

2013 the absolute sound Editors' Choice Awards

2014 the absolute sound Editors' Choice Awards

JERRY RASKIN'S NEEDLEDOCTOR 5 - STAR CUSTOMER REVIEW

CLEARAUDIO DA VINCI V2
PHONO CARTRIDGE $5,500

CLEARAUDIO STRADIVARI V2
PHONO CARTRIDGE $3,750

CLEARAUDIO CONCERTO V2
PHONO CARTRIDGE $2,750

CLEARAUDIO TALISMANN V2 GOLD
PHONO CARTRIDGE $1,750

CLEARAUDIO CONCEPT MC
PHONO CARTRIDGE $1,000

CLEARAUDIO VIRTUOSO V2 EBONY
PHONO CARTRIDGE $900

CLEARAUDIO ARTIST V2 EBONY
PHONO CARTRIDGE $600

CLEARAUDIO CONCEPT V2 MM
PHONO CARTRIDGE $250

ND

Toll Free 800.229.0644 | **Phone** 612.378.0543 | **Fax** 612.378.9024
Email info@NeedleDoctor.com | 6006 Excelsior Blvd., St. Louis Park, MN 55416

WORLD'S LARGEST SELECTION
OF TURNTABLES, CARTRIDGES, AND NEEDLES!

and Revel Ultima Salon2 speakers full range, or were reconfigured to reproduce frequencies above 80Hz when Revel's Rhythm2 subwoofer was in circuit.

Although setting up a pair of monoblocks seldom requires instructions, I enjoyed reading Theta Digital's well-written and detailed manual. It revealed that the small rear-panel switch that controls the AC mains supply must be flipped on before the front-panel switch can be used to cycle the amp from Standby to full on. This year, I've traveled frequently. When away for more than a few days, I turned off the amp completely with the rear-panel switch. Otherwise I left it in Standby, that LED glowing red, to ensure that the Prometheus was always at its best for listening. As recommended by Jeff Hipps, I played music through the Thetas at a low level for one week before doing any serious listening.

The Hypex module was designed, Putzeys wrote, to "have essentially frequency-independent distortion with 32dB loop gain from DC to 20kHz."

The most striking things about the Prometheus's sound were its huge dynamic range and bass impact. This was even evident during that first, burn-in week, when I played the timpani passage from the recording of Stravinsky's *Rite of Spring* by Eiji Oue and the Minnesota Orchestra (24-bit/176.4kHz DVD, Reference HRX RR-70). Don Dorsey's synthesizer-based "Ascent," from the *Time Warp* sampler (CD, Telarc CD-80106), erupted with enormous bass pulses through the Theta amps, followed by a mix of softer pulses, bleeps, whooshes, and high-pitched tones that pan back and forth across the soundstage. The Thetas' high power and dynamics were heard in the stunning synthesizer percussion of struck chimes and thunderous bass drum that tighten the suspense in "Assault on Ryan's House," from James Horner's score for

measurements, continued

the Audio Precision low-pass filter, the Theta's reproduction of a 1kHz squarewave into 8 ohms is obscured by switching noise (fig.2). With the filter, however, this noise is eliminated, and a 10kHz squarewave can be seen to have a small degree of overshoot that correlates with the slight response peak at 77kHz (fig.3). Commendably, however, no ringing is associated with this overshoot.

Without the Audio Precision low-pass filter, and with the Theta's input short-circuited, there was 321mV of ultrasonic noise present in the amplifier's output, with a center frequency of 453kHz. With the filter, the unweighted, wideband signal/noise ratio, ref. 2.83V into 8 ohms, was 76.3dB, this improving to an excellent 94dB when the measurement bandwidth was restricted to the audioband—and improving even more, to 95.6dB, when the measurement was A-weighted. With the amplifier passing signal, however, there was the noise level depended to some extent on the output power. Fig.4, taken with the auxiliary AP low-pass filter (LPF) (as were all the subsequent graphs), shows low-frequency spectra of the Theta's output while it reproduced a 1kHz tone at 1W (blue trace), then 100W (red),

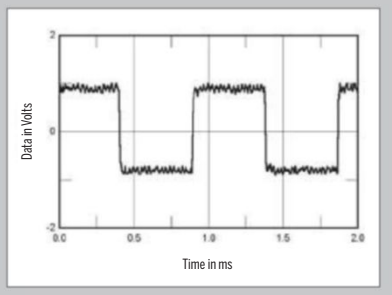


Fig.2 Theta Prometheus, small-signal 1kHz squarewave into 8 ohms without AP LPF.

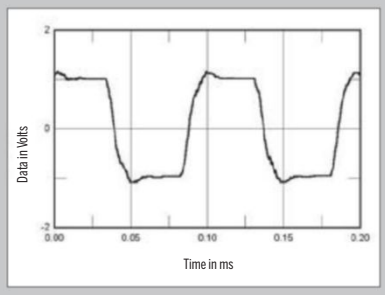


Fig.3 Theta Prometheus, small-signal 10kHz squarewave into 8 ohms with AP LPF.

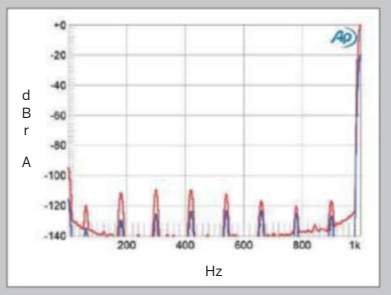


Fig.4 Theta Prometheus, spectrum of 1kHz sinewave, DC–1kHz, at 1W (blue) and 100W (red) into 8 ohms (linear frequency scale).

"The terrific KEF LS50 standmounters show no sign of losing their sparkle after dazzling our readers for a second successive year."

What Hi-Fi? Sound & Vision

ULTIMATE STUDIO EXPERIENCE

WHAT HI-FI? AWARDS 2014 — Readers' Award — KEF LS50

WHAT HI-FI? SOUND AND VISION — WWW.HIFI.COM — AWARDS 2013 — READER'S AWARD — KEF LS50

WHAT HI-FI? SOUND AND VISION — WHATHIFI.COM — AWARDS 2013 — STEREO SPEAKERS — KEF LS50

WHAT HI-FI? SOUND AND VISION — AWARDS 2012 — PRODUCT OF THE YEAR — KEF LS50

LS50

More than fifty years of groundbreaking innovation, our LS50 mini monitor applies KEF's latest acoustic technologies from Blade and beyond to deliver the uncompromised sonic purity, accuracy and transparency we originally pioneered with the legendary LS3/5a professional studio monitor for the BBC. The good news is that you no longer have to be a sound engineer to enjoy the startling illusion of presence it creates.

Now available in High Gloss Piano White.

www.kef.com/us

KEF

GP Acoustics (US), Inc.
10 Timber Lane, Marlboro NJ, 07746 P: (732) 683-2356 info@kefamerica.com

Patriot Games (RCA 66051-2); and the kickdrum at the end of the sleepy opening of David Bowie's "Putting Out Fire," from the *Cat People* soundtrack (CD, MCA MCAD-1498), exploded at a more energetic and urgent level than I'd heard before.

The Prometheuses projected a broad, detailed, involving, three-dimensional soundstage. I heard this clearly playing one of my 2015 Records to Die For: the live recording of Beethoven's Symphony 9, performed by multiple ensembles and conducted by Leonard Bernstein shortly after the fall of the Berlin Wall (CD, Deutsche Grammophon 429 861-2). The separation of instruments, the passion of the soloists and choirs, and the spaciousness of the soundstage make this recording my favorite Beethoven 9th for choral qualities.

Two other (mostly) orchestral works benefited greatly from the Prometheuses' dynamic range and soundstaging. Pass Labs' XA60.5 monoblocks[5] had proven their dynamic range with Benjamin Zander and the Philharmonia Orchestra's performance of Mahler's Symphony 2 (24/192 FLAC, Linn CKD 452). JA had noted that the "Resurrection" has huge orchestral climaxes contrasted with much softer sections in which a single instrument plays. The Thetas handled both extremely well, reproducing the solo instrumental sections clearly, then easily managing the huge climax 10 minutes into the third movement, *In ruhig fliessender Bewegung*. The second orchestral recording was our "Recording of the Month" for October 2014: the performance of Bruckner's Symphony 9 mentioned at the beginning.[6] In the *Scherzo*, the Thetas reproduced the full, surging power of the violins' emphatic, fierce fast pattern, coupled with pounding brass and drums. This is one of my favorite movements in the classical repertoire, and the Thetas' reproduction of it was the best I've heard in my listening room.

The most striking things about the Prometheus's sound were its huge dynamic range and bass impact.

The Prometheuses produced excellent imaging and soundstaging with "Breathe," from Pink Floyd's *Dark Side of the Moon* (SACD/CD, EMI 82136-2). Driving the Revel Salon2s, the Thetas projected the throbbing helicopter rotors, jackhammers, footsteps running across my listening room, dive bombers, and PA announcements on a wide soundstage to cinematic effect. With John Rutter's *The Lord Is My Light and My Salvation*, from *Requiem*, performed by Timothy Seelig and the Turtle Creek Chorale (CD, Reference RR-57CD), the sounds of the clarinet, organ, and harp were separate and precisely positioned, and each rank of choristers was spread out in a clearly "visible" arc. *A Gaelic Prayer*, also from *Requiem*, had new clarity and balance, with superb pitch definition of the pipe organ's pedal notes.

The Prometheus's bass response was outstanding. Driving the Revel Salon2 towers with the Revel Rhythm2 subwoofer turned on, the Thetas produced tuneful, solid, punchy bass with great pace and jump factor. In the *Toccata* of Widor's Organ Symphony 5, as recorded by JA (24/88.2 AIFF file), the deepest bass notes were reproduced with unexpected power and mass. The 32Hz pipes produced immense weight, solidity, and room lock. The mountainous,

5 Reviewed by John Atkinson in *Stereophile*, January 2014; www.stereophile.com/content/pass-labs-xa605-monoblock-power-amplifier.

6 Reviewed by Richard Lehnert; www.stereophile.com/content/recording-october-2014-bruckner-symphony-9.

measurements, continued

into 8 ohms. Spuriae are present at the AC-related frequency of 60Hz and its odd harmonics, which increase with the power level. This behavior usually suggests magnetic interference from the amplifier's power transformer, but as the spuriae are still all at or below –110dB (0.0003%) at the high power, their presence will be of only academic interest.

Fig.5 reveals that the Theta's distortion starts to rise above the audioband noise floor just below 10W into 8 ohms, but remains below a low 0.003% until the start of actual waveform clipping. Even then, the rise in THD is relatively gradual, and the amplifier doesn't reach 1% THD until 320W (25.05dBW), just over 1dB higher than the rated 250W into 8 ohms (24dBW). Into 4 ohms (fig.6), the Prometheus delivers 600W (24.8dBW) at 1% THD rather than the specified 500W, though this graph shows that the amplifier is less linear below clipping into this load. Into 2 ohms (not shown), the Theta still easily exceeded its specified maximum power of 850W, delivering 980W (23.9dBW). (The wall voltage was 123.4V during these tests.)

To be sure I was looking at distortion rather than noise, I examined how the percentage of THD+noise changed with frequency at a fairly high level, 20V, equivalent to 50W into 8 ohms. Fig.7 reveals that the Prometheus is

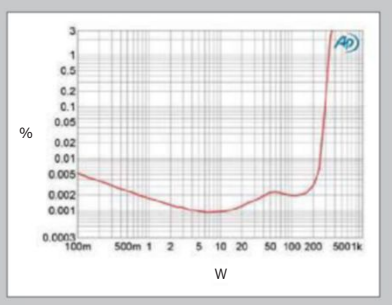


Fig.5 Theta Prometheus, distortion (%) *vs* 1kHz continuous output power into 8 ohms.

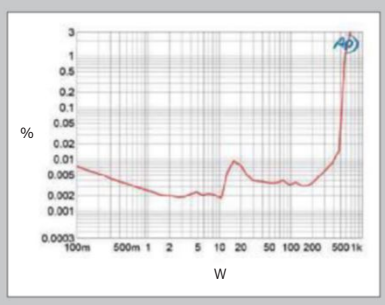


Fig.6 Theta Prometheus, distortion (%) *vs* 1kHz continuous output power into 4 ohms.

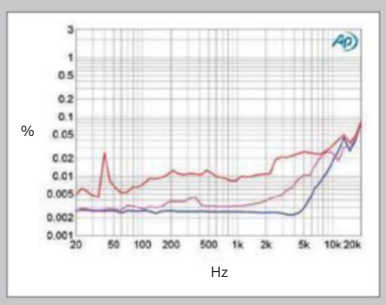


Fig.7 Theta Prometheus, THD+N (%) *vs* frequency at 20V into: 8 ohms (blue), 4 ohms (magenta), 2 ohms (red).

GEEKOUT

FOR THE SAKE OF ARGUMENT,

let's say that you're more demanding than the average audio hobbyist.

It stands to reason, then, that you care about the convenience of a portable headphone amplifier and digital-to-analog converter much more than the average Joe.

And seeing as that's the case, it's probably safe to say that you've at least heard of Geek Out.

With hi-rez playback capabilities up to 32/384 PCM + DSD 128, pure class A amplification and 1,000mW of power capable of driving any headphone, Geek Out is truly in a class of its own. But don't just take our word for it. Hear the difference for yourself.

AUDIOSTREAM Greatest Bits

Hi-Fi Choice RECOMMENDED

LHLABS
lhlabs.com

PCM DSD DXD

deep pedal note that ends James Busby's performance of Herbert Howells's *Master Tallis's Testament*, from *Pipes Rhode Island* (CD, Riago 101), produced incredible room lock. I heard and felt the various pedal ranks underpinning *Gnomus*, from Jean Guillou's performance of his own transcription of Mussorgsky's *Pictures at an Exhibition* (CD, Dorian DOR-90117).

The midrange response blossomed when my speakers were driven by the Thetas. Whether the volume was low or high, I heard delicate differences in tone and timbre in male voices, piano, and percussion instruments. The light, clear quality of Keith Jarrett's piano in "Heartland," from his *Concerts: Bregenz München* (24/96 AIFF, ECM 1227–29)[7] was not disrupted by his thudding foot stomps. The lilting tenors of the vocal group Cantus in Edie Hill's *A Sound Like This*, from their *While You Are Alive*, recorded by John Atkinson (24/88.2 digital file or CD, Cantus CTS-1208), also exhibited wonderful clarity and timbre.

Similarly, the Prometheus transmitted more of the timbres and harmonics of solo male voices, without tubbiness or midbass emphasis. Chris Martin's plaintive falsetto singing of the simple, intensely romantic words that I find so captivating and urgent in "Yellow," from Coldplay's *Parachutes* (CD, Parlophone 5 40504 2), appeared behind and separated cleanly from the dense mix of guitar, bass, and drums that supports the song's intoxicatingly slow, dark melody. And José Carreras's light, lyrical tenor remained pure during the *Kyrie* of Ariel Ramirez's *Misa Criolla* (CD, Philips 420 955-2).

The Prometheus's reproduction of the upper midrange and treble was especially commendable, especially with cymbals. I heard the harmonic overtones from different areas of single cymbals, as well as from different types of cymbals, in Mark Walker's drum solo in "Nardis," from Patricia Barber's *Café Blue* (SACD/CD, Premonition/Blue Note/Mobile Fidelity Sound Lab UDSACD 2002)—and the metallic cymbal sheen that opens "The Mooche," from the Jerome Harris Quintet's *Rendezvous* (CD, Stereophile STPH013-2), was rendered as a shimmering rather than as soft, hissing static.

ASSOCIATED EQUIPMENT

Analog Sources Linn Sondek turntable & Lingo power supply & Ittok tonearm, Spectral moving-coil cartridge; Day-Sequerra 25th Anniversary FM Reference tuner.
Digital Sources Bryston BCD-1 CD player & BDP-2 media player & BDA-1 DAC.
Preamplifier Bryston BP26.
Power Amplifiers Mark Levinson No.334 (stereo), MBL Corona C15 (monoblocks).
Loudspeakers Quad ESL-989, Revel Ultima Salon2; Revel Ultima Rhythm2 subwoofer.
Cables Digital: WireWorld Starlight Coaxial. Interconnect: Mark Levinson Silver, Red Rose Silver One, Totem Acoustic Sinew (single-ended), Pure Silver Cable, Bryston (balanced). Speaker: QED X-Tube 400, Pure Silver Cable R50 biwire double ribbon, Ultralink Excelsior 6N OFHC, Coincident Speaker Technology CST 1. AC: manufacturers' own.
Accessories Torus Power AO24-ACB-A1AB Isolation Unit; Studio 6 Pro Mike1 Audio Analyzer. Listening room: 26' L by 13' W by 12' H with semi-cathedral ceiling, moderately furnished with sound-absorbing furniture.—**Larry Greenhill**

7 *Stereophile* "Recording of the Month," March 2014, reviewed by Richard Lehnert; www.stereophile.com/content/recording-march-2014-iconcerts-bregenz-m252ncheni.e

measurements, continued

still very linear below the mid-treble region at this level, even into 4 ohms (magenta trace). However, the distortion rises considerably into 2 ohms (red), and in the top two octaves into the higher impedances, though it still remains below 0.08%.

Into 8 ohms at moderately high power, the distortion is predominantly third harmonic (fig.8), though at just 0.0024%, this, again, will be of only academic interest. As the current increases, the third harmonic is joined by even-order harmonics (fig.9), but these are all at lower levels. Intermodulation distortion is also very low, even at high powers into 4 ohms (fig.10), with the 1kHz difference product associated with tones at 19 and 20kHz lying 100dB below the peak signal level (0.001%).

The measured performance of Theta Digital's Prometheus is superb, even for an amplifier with a class-D output stage. It's similar to that of the more expensive MBL Corona C15 monoblock, which I reviewed in June 2014 (see www.stereophile.com/content/mbl-corona-c15-monoblock-power-amplifier-measurements), which shouldn't be surprising—the MBL also uses a custom version of the Hypex output module designed by the very talented Bruno Putzeys.—**John Atkinson**

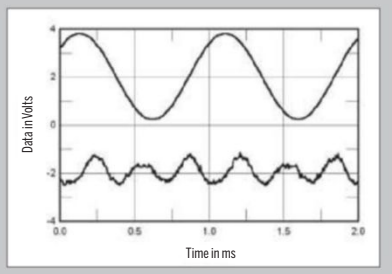


Fig.8 Theta Prometheus, 1kHz waveform at 60W into 8 ohms, 0.0024% THD+N (top); distortion and noise waveform with fundamental notched out (bottom, not to scale).

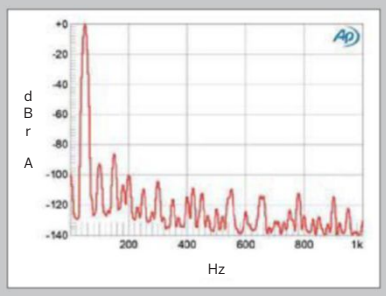


Fig.9 Theta Prometheus, spectrum of 50Hz sinewave, DC–1kHz, at 200W into 4 ohms (linear frequency scale).

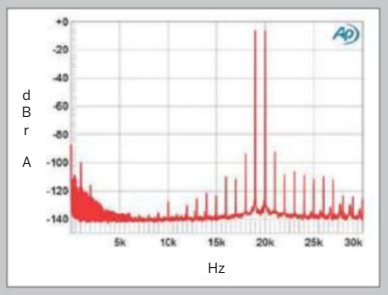


Fig.10 Theta Prometheus, HF intermodulation spectrum, DC–30kHz, 19+20kHz at 200W peak into 4 ohms (linear frequency scale).

DNA HELIX

ECLIPSE 7
IS 'TOP DOG'

READ & LISTEN

new
Cable Survey
from
stereoplay

14 Cables Tested

Download Comparative
Files & Listen for Yourself

a David Salz innovation

Other cables filter your music.
Wireworld cables let the most music through.

Technology that channels musical expression.

© 2015 Wireworld, Inc. DNA Helix U.S. Patent #8,569,627 www.wireworldcable.com

WIREWORLD®
CABLE TECHNOLOGY
Engineered for Reality™

Comparisons

While auditioning the Theta Prometheus monoblocks, I also listened to my Mark Levinson No.334 ($5900 in 1999) and the MBL Corona C15 monoblocks ($25,000/pair). A single Prometheus or Corona C15 tips the scale at less than half the weight of the No.334. The No.334 has softer-, warmer-sounding bass, and delivers 200W less at clipping into 4 ohms than either class-D amp. This might be a problem with less sensitive speakers and bigger rooms. More important, the Levinson, which I've thoroughly enjoyed for 15 years, seemed compressed, shut down, and dark, with a two-dimensional soundstage. In comparison, both class-D amps were faster, more open, more transparent, and produced a greater sense of three-dimensionality. Compared to the Prometheus, the MBL seemed leaner in the midrange and upper bass when driving the Revel Salon2s. The Prometheus had a much more successful integration with the Revel Rhythm2 subwoofer than the other two amps, being able to produce a full, driving midrange, and to reveal layers of three-dimensional detail. Overall, for me, the Theta Prometheus delivered the most emotionally involving sound.

This is one of my favorite movements in the classical repertoire, and the Thetas' reproduction of it was the best I've heard in my listening room.

Conclusions

The Theta Digital Prometheus's class-D output stage performed as predicted by theory: The monoblocks were still running coolly in my room after hours of full output to Revel's Salon2s, and delivered twice the power of my Mark Levinson No.334 at slightly less than the ML's weight. The Theta's price of $12,000/pair—though less than half the price of the MBL Coronas—puts it in the high-priced range. But the Prometheuses delivered better midrange and treble definition, greater depth of field, greater jump factor, and better imaging than any other amplifier I've heard in years. It let the Revel Salon2s sound more alive and more dynamic than ever, with faster, deeper bass response, and made it possible for the combo of Revel Salon2s and Revel Rhythm2 subwoofer to deliver better synergy than I'd heard before. The Theta Prometheus even delivered sweet, open highs and solid bass from my electrostatic Quad ESL-989s.

My last impression of the Prometheus was the same as my first: It's one of the best-sounding amplifiers I've heard in my listening room. Seven months after I began listening to it, its soundstaging, imaging, depiction of detail and speed and slam, and its exciting dynamic contrasts remain totally addictive. I give it my strongest recommendation for inclusion in Class A of *Stereophile*'s "Recommended Components." ■

xeo

the next revolution will bring a bigger bang.

Perfect sound, perfectly simple. Xeo minimizes your system to the essentials, the signal and the speakers. For any source that plays music: computer, tablet, mobile phone, personal player, docking station, network player, streaming client, TV, digital media player, or any hi-fi component. The new Xeo 6 is the absolute reference for wireless audio systems. Xeo 6. The next revolution.

www.xeo.dynaudio.com

All there is. DYNAUDIO

MICHAEL FREMER

Boulder Amplifiers 2110

LINE PREAMPLIFIER

Founded in 1984, Boulder Amplifiers is a conservative audio company that goes quietly about its business, choosing not to call attention to itself with marketing flash or acronym-laden features. Change comes slowly to such companies, which is why the just-retired 2010 preamplifier[1] enjoyed a 17-year run.

On the outside, with the exception of the new, front-panel–spanning display band of mirrored glass, the 2010's replacement, the 2110, looks little different from its predecessor, though changes inside and out are many. And the price has risen, from $48,000 to $54,000.

The 2110's basic physical building blocks are the same as the 2010's. The 2110 is a modular design with a main chassis comprising a control module that includes the front-panel; sitting on and behind it are separate housings for the left and right channels. This three-part chassis sits on the massive 2100 outboard power supply, which comprises four separate, isolated supplies connected by three umbilicals: one supply each for the left- and right-channel analog sections, one for the logic and user-interface circuits, and one for standby and power-up, which Boulder claims substantially decreases power consumption when the preamp is not in use.

To keep noise at vanishingly low levels, there are no electrical connections between the audio and user-interface sections. Control is effected through a system of optical transmitters and sensors that trigger functions within each channel's housing.

1 See www.stereophile.com/phonopreamps/621/index.html.

SPECIFICATIONS

Description Remote-controlled line preamplifier. Analog inputs: 6 balanced (XLR). Analog outputs (all balanced, XLR): 2 main, 1 Aux. Other inputs/outputs: Boulder Link Ethernet and IR mini-plug. Maximum voltage gain: 20dB. Gain range (configurable): –100 to 20dB in increments of 0.5dB. Frequency response: 0.02Hz–300kHz, –3dB; 20Hz–5kHz, +0.00/–0.03dB. THD+N, 2V output, 20Hz–5kHz: 0.0008% (–102dB); 0.001% at 20kHz (–100dB). Crosstalk, L–R or R–L: –134dB or better, 20Hz–20kHz. Crosstalk, adjacent inputs: –134dB or better, 20Hz–20kHz. Input impedance: 333k ohms. Output impedance: 100 ohms. Power consumption: 240W max, 85W idle, 500mW standby. Manufacturer specifications all taken at 240VAC mains power.
Dimensions Preamplifier: 18" (460mm) W by 6.725" (170mm) H by 16.3" (420mm) D. Weight: 63 lbs (28.6kg) net, 76.8 lbs (34.9kg) shipping. Power supply: 18" (460mm) W by 4.050" (105mm) H by 16.3" (420mm) D. Weight: 48 lbs (21.8kg) net, 58.3 lbs (26.5kg) shipping.
Serial number of unit reviewed: 11324.
Price $54,000. Approximate number of dealers: 30.
Manufacturer Boulder Amplifiers, Inc., 3235 Prairie Avenue, Boulder, CO 80301. Tel: (303) 449-8220. Web: www.boulderamp.com.

VPI Industries

Turntables, tonearms, and accessories

Budget Reference: Scout Jr.

The Humble Giant: Scout

State of the art analog
for every budget.

Affordable Super Table: Prime

http://www.vpiindustries.com

Switching Capabilities and Functionality

To the right of the 2110's centrally positioned and optically controlled, infinite-spin volume control are buttons for Balance, Mute, L(eft) and R(ight) Polarity, Display (intensity), Program, and on/off.

Like the 2010, the 2110 can be switched among its six inputs via a row of hand-polished, stainless-steel pushbuttons on the left of the front panel and labeled One through Six. A seventh button, Aux, lets you set the input routed to that output for recording or other purposes. You can program the 2110 to automatically route all inputs to the Aux output, as most preamps do. You can also configure any input to function as a tape monitor and, to prevent feedback, set the 2110 to block the chosen input from sending its signal back to the Aux output, which would otherwise produce some nasty feedback. The tape-monitor system is complex and ingenious, but Boulder's instructions about how to use it are unnecessarily complicated and obtusely described.

Completely modular construction maximizes audio performance.

To keep noise at vanishingly low levels, there are no electrical connections between the audio and user-interface sections.

Any input(s) can be configured for Theater Mode, which bypasses the volume and balance controls to produce unity gain from that input(s) at the 2110's output. This will be useful for those who combine two-channel and surround-sound systems, but Theater Mode must be used with great caution. Boulder's strong warning sows needless panic by stating, in red ink, "there is no way to control the volume of the 2110 while in Theater Mode." Of course you can control the volume of the 2110 while in Theater Mode—just not

MEASUREMENTS

I measured the Boulder 2110's electrical performance with my Audio Precision SYS2722 system (see www.ap.com and the January 2008 "As We See It," http://tinyurl.com/4ffpve4). As set up for the review, the volume control operated in accurate 0.5dB steps, the 2110 preserved absolute polarity (*ie*, was non-inverting, with pin 2 of the XLR jacks hot), and its maximum gain was exactly 20dB, as specified, for both the balanced and unbalanced inputs. The input impedance was very high, at an estimated 170k ohms (the specification states 333k ohms, but the voltage-drop method I use is not accurate for impedances greater than 100k ohms), and the balanced output impedance was 100 ohms, as specified.

The top pair of traces in fig.1 shows the Boulder's frequency response into 100k ohms, the bottom pair into 600 ohms. In both cases the audioband response is perfectly flat, and has rolled off by only 1.5dB at the 200kHz limit of this measurement. This graph was taken with the 2110's volume control set to its maximum; the frequency response didn't change at different settings of the control. Crosstalk between the left and right channels was essentially unmeasurable, while the noise floor was free from any power-supply–induced spuriae, even though I had the preamp chassis sitting atop its power supply during the measurements. The actual signal/noise ratios, ref. 1V output voltage into 100k ohms with the volume control set to its maximum, were 83.1dB (wideband, unweighted), 95.8dB (22Hz–22kHz, unweighted), and 98.5dB (A-weighted). This is a very quiet preamplifier.

Fig.2 plots the percentage of THD+noise in the 2110's output against its balanced output voltage into 100k ohms. Clipping, defined as when the THD+N reaches 1%, doesn't occur until 32V; it was still 27V into 600 ohms! More important, the downward slope of the trace below 15V suggests that the actual distortion remains buried in the noise below that output level. (A constant amount of noise becomes a decreasing percentage of the output level as the latter rises.) I therefore

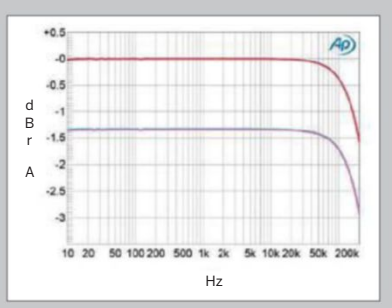


Fig.1 Boulder 2110, balanced frequency response with volume control set to maximum gain at 1V, into: 100k ohms (left channel blue, right red), 600 ohms (left cyan, right magenta) (1dB/vertical div.).

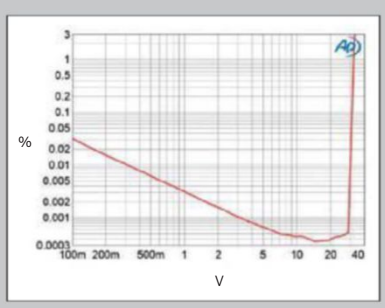


Fig.2 Boulder 2110, balanced input signal, distortion (%) *vs* 1kHz output voltage into 100k ohms.

audioengine
www.audioengineusa.com

B2 Premium Bluetooth® Speaker. Only $299.

Join the Bluetooth® audio [r]evolution.

Wirelessly stream all your music from any Bluetooth®-enabled device directly to the B2 speaker. B2 brings the signature sound of the Audioengine 2+ Desktop Speakers to the wireless world in an all-in-one stereo system.

Experience award-winning Audioengine® sound, including a hand-built cabinet, Bluetooth® aptX®, a 24-bit DAC, and extended wireless range.

Finish Options

- Black ash
- Walnut
- Zebrawood

Machines for music.
audioengineusa.com

V18 © 2014 Audioengine

Immediately apparent on first listen was the 2110's grip on the music and, especially, on the illusion of space.

the volume of the particular input *set* to Theater Mode. If Boulder thinks that's too obvious to mention, they need to talk to more consumers.

Other things the 2110 lets you do: invert the polarity of either or both channels, adjust the muting level, set the display to one of eight levels of brightness, change the volume control's default scale (–100dB to 0dB; as set-up for review, the 0dB setting was equivalent to 20dB of gain) and resolution (increments of 0.5dB) to various other options. You can even set the main and Aux output polarity, depending on your choice of power amplifier and/or recording gear. You can program input names, and set individual input levels to produce equal output levels among your inputs. I'll stop there. The 2110's configurability and adjustability are what you'd hope for and expect for $54,000.

Inputs and outputs are all balanced, and the circuitry is also fully balanced.

I hear you: "Yeah, but much of that is available in any $600 home-theater receiver." True enough. However, the

measurements, continued

plotted how the THD+N percentage changes with frequency at 15V, which I readily admit is well above the output level the Boulder will ever be asked to deliver in practical use. The result is shown in fig.3, with the 100k ohm result shown in blue and red and the 600 ohm result in cyan and magenta. The THD+N at lower frequencies is superbly low into both impedances, at <0.0004%. Though the THD does rise in the treble, reaching 0.0019% at 20kHz into 100k ohms and 0.0028% into 600 ohms, this is still very low in absolute terms.

The 2110's distortion is so low, in fact, that it taxed my ability to measure it. Figs. 4 and 5 show the spectrum of the preamplifier's output with a 50Hz tone at 10V into 100k ohms with, respectively, balanced and unbalanced input signals. The only harmonics visible are the second, third, and fifth, all at or below –120dB (0.0001%)—and, as I would expect, there is a little more second harmonic with the unbalanced input. But—and this is an enormous "but"—these spectra are not very different from that of the residual distortion in the Audio Precision analyzer's signal generator (fig.6) at the output level I used to generate the spectra for the Boulder's output. (The SYS2722 had returned from the Audio Precision mothership in Oregon just prior to my testing of the 2110.)

I therefore repeated the measurement used to create fig.4, this time notching out the fundamental tone so that the full resolution of the Audio Precision's A/D converter could be applied to just the THD+N. The result

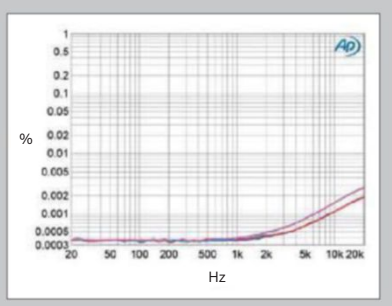


Fig.3 Boulder 2110, balanced input signal, distortion (%) *vs* frequency at 15V into: 100k ohms (left channel blue, right red), 600 ohms (left cyan, right magenta).

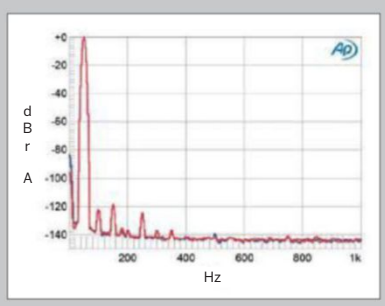


Fig.4 Boulder 2110, balanced input signal, spectrum of 50Hz sinewave, DC–1kHz, at 10V into 100k ohms (left channel blue, right red; linear frequency scale).

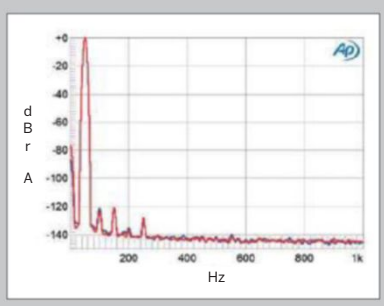


Fig.5 Boulder 2110, unbalanced input signal, spectrum of 50Hz sinewave, DC–1kHz, at 10V into 100k ohms (left channel blue, right red; linear frequency scale).

JERRY RASKIN'S
NEEDLEDOCTOR
Established 1979

WWW.NEEDLEDOCTOR.COM

HAND-BUILT IN THE USA

GRADO GOLD1 PRESTIGE SERIES PHONO CARTRIDGE

ONLY $240.00

"The **PRESTIGE GOLD**, however, seemed to be sweeter than most. It was lively and detailed but never edgy on vocal sibilants, and didn't over-emphasis leading edges on acoustic guitar. Gold? Smooth? Mellow Yellow!"

- Alan Sircom, *HI-FI CHOICE*

Hi-Fi Choice RECOMMENDED

GRADO'S PRESTIGE SERIES CARTRIDGES

GRADO SILVER1 PRESTIGE SERIES PHONO CARTRIDGE	GRADO RED1 PRESTIGE SERIES PHONO CARTRIDGE	GRADO BLUE1 PRESTIGE SERIES PHONO CARTRIDGE	GRADO GREEN1 PRESTIGE SERIES PHONO CARTRIDGE	GRADO BLACK1 PRESTIGE SERIES PHONO CARTRIDGE
$210	$160	$120	$90	$70

ND

Toll Free 800.229.0644 | **Phone** 612.378.0543 | **Fax** 612.378.9024
Email info@NeedleDoctor.com | 6006 Excelsior Blvd., St. Louis Park, MN 55416

WORLD'S LARGEST SELECTION
OF TURNTABLES, CARTRIDGES, AND NEEDLES!

2110's sound quality and build quality are most definitely *not* available for $600. And all configurations and adjustments that can be made using the front panel can also be easily done with Boulder's ergonomically excellent, full-function remote control.

Connections

All of the 2110's connections are via balanced XLR input and output jacks. Single-ended components can easily be accommodated using RCA-to-XLR adapters. (In Boulderese: "The negative input (pin 3) should be wired to ground only at the RCA phono connector.") Of course, to take full advantage of the 2110, you should use differentially balanced source components and a differentially balanced power amplifier. The 2110's three sets of XLR outputs can be used with special splitters to drive up to six power amps.

2110 *vs* 2010

The 2010 was differentially balanced at its inputs and outputs; its volume control was not. The 2110, however, is fully differentially balanced from input to output. The 2110 replaces the 2010's Boulder-engineered, unbalanced, CMOS-controlled resistor ladder volume control with one that's fully differentially balanced and said to improve signal/noise ratio and eliminate step noise.

The 2010 used Boulder's proprietary 993 gain stage, which had through-hole, hand-soldered boards potted and encased in an extruded housing. This module has been completely reengineered and redesigned. The new 993S features surface-mount technology, with all boards "stuffed," assembled, and finished in-house, then potted and enclosed in a machined housing. The 2110 also features new bias-injection and ground- topologies.

Along with the all-new circuit design, the 2110's aluminum case is machined from stock and its surfaces are all bead-blasted and clear-anodized. The 2010's case was a combination of bead-blasted, machined aluminum, and powder-coated sheet stock. The labels on the rear panel are now engraved, not silk-screened. All of Boulder's metalwork is CNC-machined in-house, which in high-end audio is unusual. Boulder also does its own bead blasting while the clear anodizing is performed by a subcontractor.

External control has migrated to the Internet age, with full IP control and two-way feedback, a 12V trigger via a mini-jack, as well as Boulder's Boulder Link via RJ-11 connector. All of this is familiar to home-theater geeks, less so to the rest of us, for whom an on/off switch is less threatening.

There are other, less significant changes. More important is a shift to a more sophisticated protection circuit in which each power-supply is microprocessor controlled and monitored. Should operating temperatures exceed the correct range, the 2110 will mute until the affected supply returns to normal.

Boulder's Game Plan

The foundation of the 2110 is its massive power supply for each channel. These feature big, made-in-USA toroidal transformers potted with a resin of mineral glass and epoxy, and encapsulated in custom, magnetically shielded steel en-

measurements, continued

is shown in fig.7: only the third and fifth harmonics are visible, and by comparing this graph with a similar one taken for the SYS2722's output, it appears as if the Boulder is introducing about the same amount of third-harmonic distortion as the Audio Precision's generator, but not actually introducing any second- or fifth-harmonic distortion for frequencies below the low treble!

Fig.3 shows that the THD does rise toward the top of the audioband, this due to the production of some second harmonic. This can be seen in fig.8, which shows the spectrum of the 2110's balanced output while the preamp drove an equal mix of 19 and 20kHz tones into 600 ohms. The spikes at 38 and 40kHz are slightly higher than those present in the Audio Precision's output. Though the actual intermodulation products in this graph, at 18, 21, and 39kHz, are all about 10dB higher than those in the SYS2722's output, these spuriae are still all extraordinarily low in absolute terms—and there is no difference product visible at 1kHz.

Boulder's 2110 is the best-measuring preamplifier I have encountered. Not only are its distortion and noise very low, the 2110 doesn't change its operating parameters with output voltage, load impedance, or the setting of the volume control, and hardly at all with frequency. I am not surprised that Michael Fremer was impressed by what the 2110 did in his system. I just regret that I was not able to audition it in my system, the review sample having to be shipped to the 2015 Consumer Electronics Show as soon as I had finished measuring it.—**John Atkinson**

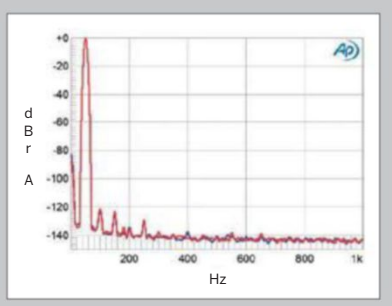


Fig.6 Audio Precision SYS2722, balanced output signal, spectrum of 50Hz sinewave, DC–1kHz, at 1V into 100k ohms (left channel blue, right red; linear frequency scale).

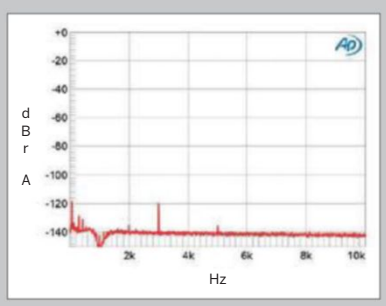


Fig.7 Boulder 2110, balanced input signal, spectrum of 1kHz sinewave, DC–10kHz, at 10V into 100k ohms with fundamental tone notched out (left channel blue, right red; linear frequency scale).

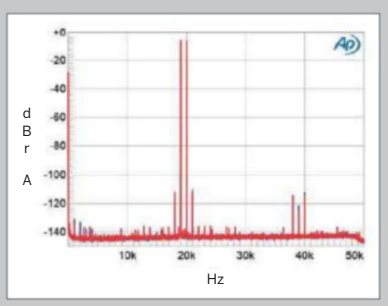


Fig.8 Boulder 2110, balanced input signal, HF intermodulation spectrum, DC–50kHz, 19+20kHz at 2V into 100k ohms (left channel blue, right red; linear frequency scale).

COME. LISTEN.

AXPONA

AUDIO EXPO NORTH AMERICA

North America's Premier Event for Audiophiles and Music Lovers

APRIL 24-26, 2015
THE WESTIN O'HARE, ROSEMONT/CHICAGO, IL

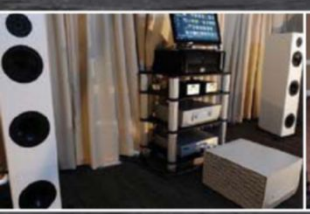
Immerse your senses in hundreds of listening rooms and exhibits featuring the world's finest audio equipment.

- **Loudspeakers**
- **Headphones**
- **Turntables**
- **Vinyl**
- **Amplifiers**
- **And More!**

Create your listening environment, define your sound.

Experience AXPONA!

For Ticket Info: www.axpona.com or 203-371-6322.
Save 10% on your tickets with promo code AXP57F.



The 2110 uses Boulder's proprietary 993S op-amps.

The 2110's rendering of Hejira, and particularly its deft handling of transients, was mesmerizing.

closures. Each assembly weighs more than 8 lbs. The power supplies for the logic circuits are equally well endowed.

The four interlocking chassis that comprise the 2110 are well damped, to eliminate microphonic resonances. This is accomplished with a combination of damping materials and the fact that the vibrational resonances of the entire structure are both higher than those of the individual housings and well above the audioband. I could devote half a page to the design and construction of the multilayer feet that support the 48-lb power supply and the 63-lb main housing.

The 2110's input selection is logic controlled, with signal routing to the six 993S gain modules via sealed relays. The 2110's input circuit transistors are bipolar, which Boulder says makes them lower in distortion and more reliable than FETs. The 2110's direct-coupled design includes a servo capable of eliminating up to 50mV of source-produced DC offset voltage.

Boulder has paid maximal attention to even the most minimal issues. The display window is made not of plastic but of hand-ground, mirror-coated Pyrex, to prevent warping and/or scratching and to maximize legibility. The mirror finish is produced to Boulder's specs to avoid halo effects and blurring, while maintaining the mirror finish in standby mode.

Speaking of mirror finishes, the 15 buttons on the infrared remote control are cut from stainless steel and hand-polished in-house, in a nine-step process that matches their looks to that of the front panel's buttons and mirrored display.

The 993S gain module features high current, high slew rate, high current output, low output impedance, and wide bandwidth. Each channel contains three positive and three negative boards, mounted and potted within a machined assembly, and each produces up to 20dB of gain. Before installation, the boards are tested, retested, and trimmed using an automated, computerized process that evaluates up to 10,000 different combinations of resistor values to match each 933S to a predetermined engineering specification. Whew!

In today's zero-negative-feedback world, Boulder almost defiantly uses what it calls "correct and appropriate levels" of negative feedback to produce "ideal operating parameters" that include "gain determination, constant group delay across the entire bandwidth (maximally linear phase response) and bandwidth limiting." Boulder claims that negative feedback earned its bad reputation because, at one time, the op-amps used in wideband applications were too slow. However, Boulder claims that *eliminating* feedback produces sonic compromises and increased distortion.

Sound

I used with the Boulder 2110 a combination of single-ended and balanced source components, and ran the big darTZeel NHB-458 monoblocks in balanced mode via a long TARA Labs Zero balanced cable. (The darTZeels' actively balanced inputs use a translator to convert balanced signals to single-ended.) Hum, noise, hiss, and input-switch transients were nonexistent throughout the review period.

Immediately apparent on first listen was the 2110's *grip* on the music and, especially, on the illusion of space. Both my reference darTZeel NHB-18NS and the Dan D'Agostino Master Audio Systems Momentum preamplifiers throw large soundstages with billowy ease, but the Boulder produced image intensity, physicality, and solidity that were unprecedented in my experience. First take: a giant *Wow*.

Draw a line on a piece of paper. At one end write *hard, etchy, overdamped, hyperfocused*, and *harmonically bleached*. At the other end write *soft, bulbous, cloudy, rhythmically flaccid, harmonically oversaturated*, and *dynamically restrained*. You now have a visual representation of the extremes of the sonic continuum along which audio gear generally, and electronics in particular, can be placed. You could create other dichotomies: *noisy–quiet, aggressive–limp, slow–fast*, etc.–or, in the old days, *solid-state–tube* (though today's solid-state needn't sound transistory, nor tubes tubey).

The ultimate preamplifier is the proverbial "straight wire with gain"–as the 2014 December's cover indicates. It does nothing to the sound other than change its volume. Just as John Atkinson in that issue's review of the Ayre KX-R Twenty wishes he could have heard the Dan D'Agostino

S U M I K O

S U B W O O F E R S

MUSICAL SUBCULTURE.

THE NEW SERIES OF SUBWOOFERS FROM SUMIKO REPRESENTS DECADES OF SUBWOOFER EXPERIENCE FROM THE TEAM AT SUMIKO, COMBINED WITH THE DESIGN ENGINEERING MASTERY OF SONUS FABER. CREATED FOR MUSIC AND THEATER, SUMIKO SUBWOOFERS ACHIEVE WEIGHT AND AUTHORITY WHILE PRESERVING ULTIMATE ARTICULATION AND EXPRESSION.

S.0	S.5	S.9
COMPACT PRODIGIOUS	**MUSICAL BALANCED**	**AUTHORITATIVE ENGAGING**

sumikoaudio.net

FINE SOUNDS GROUP

audio research · McIntosh · Sonus faber · Wadia · SUMIKO · FINE SOUNDS ASIA

Exclusive distribution in North America by Sumiko | 2431 Fifth Street | Berkeley, CA 94710

Momentum, the Lamm LL1 Signature, and the Simaudio Moon Evolution 850 preamps, I wish I could hear those and Ayre—but lately I've heard only the darTZeel NHB-18S (my reference), the Ypsilon PST-100 MK2, the D'Agostino Momentum—and the Boulder 2110. Though none of those models sounds like any of the others, all sit close to the center of that continuum, well away from either set of extremes. Where does the Boulder sit on the line, and relative to the other preamps I've heard? Well, that was the exercise.

The first recordings I had to hear through the Boulder 2110 were minimally miked spatial spectaculars. *Equinox*, by drummer Markus Schwartz and Lakou Brooklyn, is a remarkable, 24-bit/96kHz *digital* recording (WAV files, Soundkeeper SR1002). The ensemble consists of trumpet, hollow-bodied electric guitar, bass, and percussion performing lilting, simmering, hypnotic Haitian jazz. *Equinox* reproduces this ensemble with greater intimacy than do some other minimally miked recordings I can think of, yet the air is palpable. I play this file a lot.

Compared to my reference, the Boulder was placed toward the very center of the continuum, where images became better defined, the bass tightened, fingers pressing on guitar frets produced greater on/off delineation, and the overall aural picture snapped into greater focus. The sound was less relaxing and more exciting, with no downside.

That made me try a Norwegian album: *Himmelskip* (Ship of Heaven), by guitarist Iver Kleive and pipe organist Knut Reiersrud, recorded in a church to Studer analog (CD, Kirkelig Kulturverlsted FXCD163). It's like a two-man Pink Floyd album. The recording has space, deep bass, and a guitar that's easily lost in the ambience. The darTZeel reproduces it well, similar to how the D'Agostino did it,[2] but the Boulder 2110's ability to grip the woofers and produce deep pipe-organ pulses as well as space-carving guitar transients brought *Himmelskip* into the greatest relief I've heard from it.

That led me to another recording made in a church: an unreleased 24/88.2k session by fellow *Stereophile* writer Bob Reina's jazz band, Attention Screen, engineered by John Atkinson and featuring Bob on church organ. The results were similar: the space reproduced by the 2110 was as generously wide and deep as through the slightly softer-sounding preamps, but bass definition was better, and in greater relief against the room backdrop. The chimes on this recording had greater crystalline clarity without sounding too etched.

A preamp, like the Boulder 2110, that specializes in carving space, 3D imaging, transient precision, and deep, tight, well-articulated bass can sound analytical and/or harmonically less than fully saturated. The Boulder suffered none of those maladies.

Chris Bellman's recent vinyl mastering of Joni Mitchell's *Hejira* (LP, Asylum/Rhino R1 01087) is much improved over the somewhat dynamically compressed original. Here, chorused electric guitar and Mitchell's closely miked voice could spell trouble for a fast, veil-lifting, well-detailed preamp, but the 2110's rendering of *Hejira*, and particularly its deft handling of transients, was mesmerizing. Its presentation of micro- and macrodynamics produced the good kind of chills. Not that the darTZeel didn't—but those chills just weren't as intense, or as ear-poppingly three-dimensional.

A test pressing of an upcoming reissue of Dean Martin's *Dream with Dean* (LP, Reprise/Analogue Productions) demonstrates what a superb singer he was. On this session, backed by a small combo, he's got his lips literally *on* the microphone. You can hear everything. Dean is in the room, but through a "no filter" preamp like the Boulder I also heard the mike's nonlinearity (or whatever caused the slight tonal astringency). The backing group, placed hard left/right and miked at a greater distance, sounded transparent and cleanly rendered but somewhat mellow, Dean slightly hard.

With the darTZeel back in place, two things happened: the combo's clarity softened and the transients lost some distinction, but Dean's voice sounded more natural, less hyper. Neither preamp gave me all I wanted from this superb recording.

I've been going through some used classical LPs I picked up at Quality Records in Melbourne, Australia, for $7 Australian, including a minty original pressing from 1972 of pianist Alicia De Larrocha performing Falla's *Nights in the Gardens of Spain* and Chopin's Piano Concerto 2, with Sergiu Comissiona and L'Orchestra de la Suisse Romande (UK Decca SXL 6528). As Deccas tend to be, it's a wonderful-sounding recording: a mid-hall perspective with a warm, full sound and natural instrumental focus through the Boulder. The piano sound in the Chopin, in particular, is as you'd hear it from at least 20 rows back, but despite the surrounding warmth, the piano's focus on the stage was cleanly rendered. When I returned the darTZeel to the

ASSOCIATED EQUIPMENT

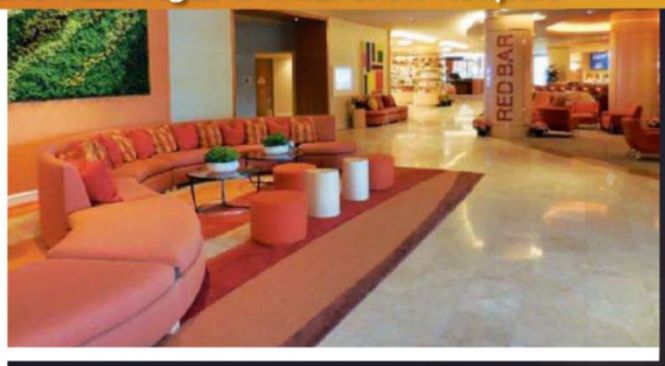
Analog Sources Continuum Audio Labs Caliburn turntable, Cobra tonearm, Castellon stand; Kuzma 4Point tonearm; Lyra Atlas & Etna, Ortofon Anna, Kiseki PurpleHeart, Miyajima Labs Zero (mono) & Madake cartridges.
Digital Sources Simaudio Moon Evolution 650D DAC/transport; Ayre Acoustics QA-9 A/D converter; Lynx Hilo A/D-D/A converter; Meridian Digital Media System; Pure Vinyl & Vinyl Studio LP-ripping software.
Preamplification Ypsilon MC-10L & MC-16L step-up transformers; Ypsilon VPS-100, Lamm LP 2.1 Deluxe phono preamplifiers; darTZeel NHB-18NS preamplifier.
Power Amplifiers darTZeel NHB 458 monoblocks.
Loudspeakers Wilson Audio Specialties Alexandria XLF.
Cables Interconnect: Snake River Audio Boomslang S/PDIF, Stealth Sakra & Indra, TARA Labs Zero Evolution & Zero, Teresonic Clarison Gold, WireWorld Platinum Eclipse. Speaker: TARA Labs Omega Gold, WireWorld Platinum Eclipse 7. AC: Shunyata Research Ztron Alpha Analog & Alpha Analog HC & Alpha Digital.
Accessories Shunyata Research Hydra Triton & Typhon power conditioners (2 sets); Oyaide AC wall box & receptacles; ASC Tube Traps; RPG BAD, Skyline & Abffusor panels; Stillpoints Aperture Room panels; Synergistic Research UEF products (various); Symposium Rollerblocks & Ultra platform; HRS Signature SXR, Finite Elemente Pagode stands; Audiodharma Cable Cooker; Furutech, Stein Audio demagnetizers; Furutech deStat; Loricraft PRC4 Deluxe, Audio Desk Systeme record-cleaning machines.
—Michael Fremer

2 See my August 2014 review: www.stereophile.com/content/dan-dagostino-master-audio-systems-momentum-line-preamplifier.

World Class Hotel
World Class Audio AND Home Theater

Combining T.H.E. Best of T.H.E. Show Las Vegas & T.H.E. Show Newport

T.H.E. SHOW NEWPORT
The Home Entertainment Show Newport Beach



GREAT FOR INDUSTRY AND CONSUMERS!

T.H.E. Show Newport @ Hotel Irvine
Irvine CA - 405 FWY & Jamboree Rd
(five minutes to O.C./SNA Airport)

May 29 - 31, 2015

In a world built for the masses, personalize & customize:
YOUR AUDIO - YOUR WAY - YOUR LIFESTYLE
World Class Speakers, Amplifiers, Analog, Digital, Vinyl, CD's, Download Technology, Headphones, & Phenomenal Home Theater
Presented in private sound rooms by the Globe's Most Prestigious Manufacturers and Dealers!

Alongside The Exclusive Car Show, Wine-Tasting, Informative Seminars, & Live Entertainment, 2015 unveils all NEW:

Home Electronics Automation by CRESTRON. & The Latest in Car Electronics by Ford

- Sneak Preview for Dealers, Distributors, & Press: MAY 28, by Invitation Only -

TO RESERVE EXHIBIT SPACE, BUY TICKETS, RESERVE SLEEPING ROOMS, AND FIND ADDITIONAL INFO, VISIT: www.theshownewport.com

THE LOS ANGELES & ORANGE COUNTY AUDIO SOCIETY

stereophile

system, this LP was equally satisfying, but with a slightly more relaxed sound and a bit more warmth, though the piano was equally well rendered and focused. Both presentations were "live"-like, but the Boulder, at almost twice the darTZeel's price—the NHB-18S currently costs 31,700 Swiss Francs, equivalent to $32,350—drew a more complete picture without sounding analytical. The D'Agostino Momentum would be closer to the darTZeel; the Ypsilon PST-100 MK2 in passive mode would be somewhat closer to the Boulder.

The Boulder 2110's dynamic slam, bottom-end grip, and overall focus made rock records and files pop from the speakers in 3D. The Grateful Dead's *American Beauty* (2 45rpm LPs, Warner Bros./Mobile Fidelity Sound Lab) and a test pressing of the Beach Boys' *Surfer Girl* (LP, Capitol/Analogue Productions) produced particularly holographic images, and a vivid tonality. The Boulder 2110 was as tonally neutral and transparent a preamp as I've heard. It was also drop-dead silent—free of such unwanted artifacts as grain, glare, and hyperdefined edge. I'm sure it will measure as well as it didn't sound.

An "ergonomically excellent" remote control, decided MF.

Conclusions

When a preamplifier costs as much as a really nice car, its buyer is entitled to fanatical build quality in every aspect of its design, an enjoyable user interface, and faultless sound quality—as small a sonic fingerprint as is humanly possible, or none at all.

The Boulder 2110 delivered all of the above, and more. Its build quality and fit 'n' finish are top shelf, the user interface and remote control are glitch free, and it's easy and pleasant to use (though some might find the size of the characters on the LCD screen billboard-like) and the sound is as transparent and without character as I've heard from any electronics component.

The 2110 definitely did *not* sound, as Boulder detractors like to say, overly analytical, dry, or harmonically bleached. It made recordings I know to be truly exceptional sound even more so through my system. I could listen until as late at night as I could stay awake—and I did. The 2110 did nothing to hide the badness of truly awful recordings—or "unusual" ones such as Bruce Springsteen's *The River*—but it seemed to separate out the badness in such a way that my ears could more easily ignore it.

All of the preamplifiers mentioned in this review are exceptional components that I'd happily own and consider the job done. All sit close to one another on that continuum of sound quality and each presents a seamless, coherent sonic picture that gets out of the way and lets the recording shine through. But when the Boulder 2110 left the building, it took with it its holographic grip and spatial presentation, as well as its ability to resolve fine detail—qualities that raised my system to a level none of the rest could quite manage. ■

JERRY RASKIN'S NEEDLEDOCTOR

Established 1979

VISIT US ON FACEBOOK
www.facebook.com/needledoctor

Toll Free 800.229.0644 | Phone 612.378.0543 | Fax 612.378.9024
Email info@NeedleDoctor.com | 6006 Excelsior Blvd., St. Louis Park, MN 55416

SPIN CLEAN RECORD WASHER $79.99

The amazing manual record cleaning machine!

MOBILE FIDELITY ORIGINAL MASTERS SLEEVES 50 PK $20

Mobile Fidelity Inner Sleeves Have Been the Industry Standard for Over 30 Years! The BEST Protection for your Irreplaceable Vinyl

SIMPLE MAT RECORD MAT $26.95

I love this mat! The sonic virtues are apparent immediately - bass tightens up, vocals come forward, and more air is put around the instruments. - *BRIAN LICKEL, ND*

MILTY ZEROSTAT 3 ANTI-STATIC GUN $100

"But the Milty Zerostat 3 lifted my heavy vinyl depression. It's an accessory I wouldn't want to live without." - *STEPHEN MEJIAS, Stereophile*

LKG DIGITAL STYLUS FORCE GAUGE $50

Never second guess your tracking force again! Easy to use and accurate to within 0.01 grams.

MOBILE FIDELITY GEO DISC $50

One of the most popular and easy to use cartridge alignment tools ever produced!

ONZOW ZERODUST $69

Discover the Onzow difference! Clean your stylus like never before!

stereophile RECOMMENDED COMPONENT

MUSIC HALL ACRI-PLAT TURNTABLE PLATTER $125

"The sound stage became more detailed. And of course, static and background noise is notched down a bit. My music sounds a lot more lively and dynamic. Couldn't be happier with this platter!"

AUDIOQUEST CARBON FIBER BRUSH $15

For every day dustbusting I wouldn't kick Audioquest record brush off my vinyl either. - *MICHAEL FREMER, Stereophile*

www.needledoctor.com

ART DUDLEY

Wilson Audio Specialties Duette Series 2

LOUDSPEAKER

I've seen how most manufacturers work. They start out by making products they believe in—products consumers are likely to love. But after a while they begin listening to their dealers and distributors and marketing consultants, most of whom are inclined to say things like: "You need to make a six-figure turntable, to compete with all the other six-figure turntables." "You need to make a $1500 amplifier, to fill that price gap in your product line." "You need to make a small, stand-mounted loudspeaker."

It's my impression that Wilson Audio Specialties doesn't work that way. I think they set out to make the speakers they wish to make. Those products tend to look and sound the way they do and sell for the prices they do as simple consequences of the company's apparently irrepressible perfectionism.

Nonetheless, I asked company founder David Wilson, a man known for his generously sized floorstanding loudspeaker systems, why, in 2006, he went to the trouble of designing and building the Duette: a model so small and so well suited for placement against a wall that it restored to the otherwise antiquated phrase *bookshelf speaker* some measure of truth. The first four words out of his mouth were: "Because space is valuable."

Which makes sense—especially to a New Yorker. Wilson Audio, after all, makes loudspeakers whose average price is $69,325/pair.[1] Consequently, one can fairly assume that almost all owners of Wilson speakers are people of above-average means. Thus, if we consider that many well-to-do audiophiles are also city dwellers, and if we bear in mind the kind of money that changes hands for even the smallest apartments in the largest US cities, the scale of the space problem becomes apparent.

Let's say an apartment dweller is impressed with the

1 This is the average of the US retail prices of the standard-color versions of the six models that comprise Wilson's line of two-channel speakers. If one takes into account special finishes, etc., the average price is slightly higher.

SPECIFICATIONS

Description Two-way, port-loaded, stand-mounted loudspeaker. Drive-units: 1" doped silk-dome tweeter, 8" paper-cone woofer. Frequency response: 33Hz–21kHz, ±3dB. Sensitivity: 92dB/W/m. Impedance: 4 ohms nominal, 4.35 ohms minimum.
Dimensions Speaker: 18.5" (470mm) H by 10.5" (267mm) W by 16.1" (239mm) D. Weight: 45 lbs (20.4kg). Stand: 21.6" (555mm) H by 11.8" (302mm) W by 18.6" (476mm) D. Weight: 65 lbs (29.5kg).
Finishes Many: Upgrade finish, add $3000/pair; custom finish, including paint matching, add $3500/pair.
Serial numbers of units reviewed 1509, 1510.
Prices $22,500/pair with integral stands/crossovers, $20,000/pair with outboard crossovers. Approximate number of dealers: 39.
Manufacturer
Wilson Audio Specialties,
2233 Mountain Vista Lane,
Provo, UT 84606.
Tel: (801) 377-2233.
Web: www.wilsonaudio.com.

MONTREAL AUDIOSHOW | SALON SON & IMAGE

Hilton Bonaventure Hotel, 27-29 MAR '15

high performance audio systems // top brands // live seminars // product launches // music streaming // headphones // vinyl // turntables // accessories // and much, much more

Make real connections and share the experience with genuine audio consumers at the 'Montreal Audio Show'. Packed with some of the world's best audio gear. Compare hundreds of audio, headphone, high-end and home entertainment brands before you buy. Sit down and relax in superb surroundings.

Over 50 demo rooms, headzones, live music, competitions, guest speakers, special events – to make a true audio experience and a great day out, or weekend away. **Visit the website for full details and discounted show tickets.**

/montrealaudioshow **/SSIexpo** **montrealaudioshow.com**

INTERESTED IN EXHIBITING? BOOK NOW WITH SARAH / 450-441-5989 / sarah@chestergroup.org

VANCOUVER AUDIOSHOW 15

HILTON VANCOUVER METROTOWN, MAY 8-10

BOOK YOUR SPACE WITH PHIL

604-317-7819 | phil@chestergroup.org

CHESTER GROUP
THE SIGN OF A GOOD SHOW

Chester GRP (Exhibitions) CANADA Ltd. Show Organisers. All Intellectual rights reserved.

performance of Wilson's entry-level floorstanding speaker, the Sophia Series 3 ($22,500/pair), which I reviewed in the February 2011 issue.[2] Like most Wilson models, the Sophia 3 is a freestanding design; each speaker requires at least 16 square feet of floor space—a conservative estimate that surely applies to the Sophia's competitors. If an audio enthusiast lives in San Francisco or Chicago or New York, the amount of space—air and bare floor—required by *a pair* of those loudspeakers is worth considerably more than those expensive speakers themselves. Ouch.

Perhaps unsurprisingly, that first Duette loudspeaker met with success.[3] No more surprising is that Wilson has now introduced a revised version: the Duette Series 2 ($22,500/pair in standard finishes, with integral stands).

Description

To make clear what's special about the Duette Series 2, a few words are in order about Dave Wilson's original stand-mounted design—which was not *exclusively* a stand-mount. As Wilson explained to me, he set out to design a small speaker that would work in virtually any domestic setting: "It would seem obvious to non-audiophiles that speakers should fit wherever you need them to: [They] should just work. I wanted to design a loudspeaker that would work in what we call a hostile environment. We even designed it so that, if you wanted to, you could put it inside a bookcase or a cabinet. I assumed a worst-case scenario."

The original Duette could indeed be placed almost anywhere in the listener's room. For those who wished to use it on a bookshelf or within a wall unit, and to offer the flexibility of being able to orient the speaker's enclosure vertically or horizontally, the Duette was built with flat, parallel sides. Embedded within those sides and within the enclosure's bottom panel were Magnepods—magnetic inserts that could hold in place three small, metal alignment cones per panel, while leaving all of the remaining surfaces cosmetically undisturbed.

Because the Duette's enclosure didn't contain a crossover network, also included was the Novel—an outboard housing the size of a large book. Linked to its Duette by an umbilical cable supplied by Wilson, the Novel could sit next to or near its speaker when the latter was mounted on a shelf. The Novel could also be snugged into a recess in the Duette's optional dedicated stand.

Used with those stands, the original Duette could also be used in open space—and therein lies a key part of the story of its revision. As Dave Wilson explained, "We had

2 See www.stereophile.com/content/wilson-audio-sophia-series-3-loudspeaker.

3 John Marks reviewed the original Duette in May 2012; see www.stereophile.com/content/wilson-audio-specialties-duette-loudspeaker.

MEASUREMENTS

For a welcome change from my usual routine, I drove 250 miles north, into snowy upstate New York, to measure Wilson Audio's Duette Series 2 in situ chez Dudley. I used DRA Labs' MLSSA system and a calibrated DPA 4006 microphone to measure the Wilson's frequency response in the farfield, and an Earthworks QTC-40 for the nearfield and spatially averaged room responses. The amplifier used for the quasi-anechoic responses was the solid-state Musical Fidelity 250W monoblock that I bought 10 years ago to use for all my speaker measurements. For the in-room response measurement, I used the amplifier Art used for his listening, tubed Shindo Corton-Charlemagne monos.

The Duette's voltage sensitivity is specified as 92dB/W/m at 1kHz; my estimate was 91.6dB(B)/2.83V/m, which is both within experimental error of the specification and well above average. The Duette will play loudly with low-powered amplifiers. The specified nominal impedance is 4 ohms, with a minimum magnitude of 4.35 ohms at 160Hz. My measurement of the Duette's impedance is shown in fig.1. The magnitude (solid trace) remains between 4.3 and 6 ohms for almost the entire audioband above the bass, with a rise to 7 ohms in the upper midrange. The minimum magnitude is 4.24 ohms at 178Hz, and while the electrical phase angle briefly reaches high values between 20 and 80Hz, the effect of this will be ameliorated by the fact that the magnitude is high at the same frequencies.

There are two small discontinuities in the impedance traces, one just below 500Hz and another, smaller one at 300Hz. This behavior in the midrange usually hints at some kind of vibrational behavior in a speaker's enclosure, and indeed, when I investigated the Duette's cabinet with a simple, plastic-tape accelerometer, I found a fairly strong resonance at 469Hz on both sidewalls and the top. To my surprise, however, this mode was strongest on the stand's pillar (fig.2). In general, the higher in frequency a resonant mode in an enclosure, the less likely it will be to color the sound, and at 469Hz, this measured resonance may well look worse than it sounds. I note that

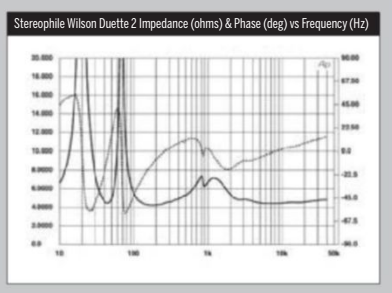


Fig.1 Wilson Duette 2, electrical impedance (solid) and phase (dashed) (2 ohms/vertical div.).

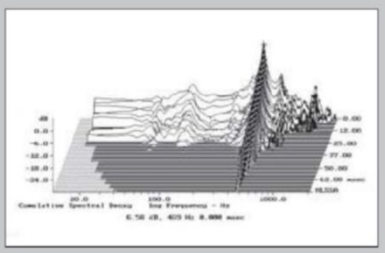


Fig.2 Wilson Duette 2, cumulative spectral-decay plot calculated from output of accelerometer fastened to center of stand pillar (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz).

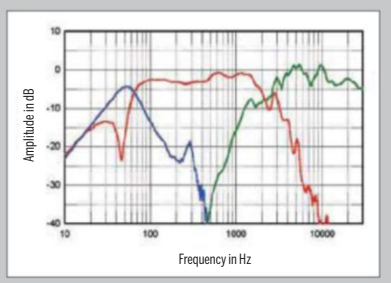


Fig.3 Wilson Duette 2, acoustic crossover on tweeter axis at 50", corrected for microphone response, with nearfield responses of woofer (red) and port (blue), respectively plotted below 350Hz, 450Hz.

American Handcrafted Sound.

Rogers HIGH FIDELITY

It doesn't look like much, but this resistor is designed for the Space Shuttle and we accept nothing less in our products.

We are the ONLY manufacturer using Mil-Spec level components AND point-to-point wiring assembled in our New York factory.

Our products are guaranteed for life.

SEARCH #RogersHighFidelity TO LEARN MORE

BORN IN WARWICK, NY | 845-987-7744 | **ROGERSHIGHFIDELITY.COM**

the benefit, when designing Series 2, to look at how Series 1 was used. And we decided that Series 2 would [always] go against the wall." Dave's son Daryl Wilson, who led the revision effort, elaborated: "Even though the Duette is so comprehensive, we found that [Series 1] was being used primarily on stands: Not many people used it any other way. We found the market really wanted a stand-mounted two-way."

Thus came a course correction for the Duette: While it remains possible to buy the Duette Series 2 and Novel crossover *without* the matching stands ($20,000/pair), Wilson Audio doesn't expect to ship many that way—and they've dispensed with the Magnepods in favor of threaded inserts on the bottom panel, with no provision for horizontal mounting. Consequent to these and other changes discussed below, the Duette Series 2 is intended solely for use near room boundaries. "What we recommend is that, if a person has the space, use a Sophia," said Daryl—who took advantage of the opportunity to redesign the Duette's stand, opting for a more sculpted appearance, with a structure that conceals the cables and crossover. And a new, more secure mounting

With a wide range of stereo material, the Duettes sounded spatially correct and pleasantly substantial.

arrangement means that "vibrations are drained down from the enclosure and through the stand, into the floor, more effectively," according to Daryl.

After reworking the stand, Daryl busied himself with the redesign of the speaker itself. (Dave gave feedback at the conclusion of the project.) Relieved of having to make an enclosure that could be laid flat on one side, he gave the side panels the sort of sculpted appearance and enhanced rigidity found in other, more expensive Wilson models. At the same time, he changed from a plumb front baffle to one that's slightly angled, for physical time alignment of the drivers.

Speaking of drivers: Dave Wilson says that, after freeing the Duette from the ironic constraint of having to function without boundaries, he wanted a tweeter "with narrow

measurements, continued

AD didn't comment on any midrange congestion that might have been laid at the feet of this mode.

The accelerometer found no vibrational problems at 300Hz, the frequency of the other wrinkle in the impedance traces. However, when I looked at the nearfield output of the 3"-diameter port (fig.3, blue trace), I saw a well-suppressed mode at that frequency that disturbs what would otherwise be a well-controlled rollout. The saddle centered on 46Hz in the impedance-magnitude trace suggests that this is the tuning frequency of the port, and the woofer's nearfield response does indeed have a sharply defined notch at 46Hz (fig.3, red trace). The woofer cone is being held stationary at that frequency by the back pressure from the resonance, hence the notch. The woofer's output rises slightly through the midrange before crossing over to the tweeter (green trace) between 2 and 3kHz and rolling off with a fairly steep slope, this broken by small peaks at 2.8 and 5.1kHz. The tweeter's output is even within its passband, and the tweeter is still putting out energy on axis at the 30kHz limit of this graph.

The overall farfield output, averaged across a 30° horizontal window centered on the tweeter axis and taken with the grille removed, is shown as the trace above 300Hz in fig.4. This trace is spliced at 300Hz to the complex sum of the nearfield woofer and port responses (taking into account acoustic phase and the different distances of the woofer and port from a nominal farfield microphone position). The small peak in the upper bass is an artifact of the nearfield measurement technique and is not as well developed as I usually find in two-way designs—the Duette's woofer alignment is optimized for the intended near-wall placement. Higher in frequency, the Duette's balance is relatively even, with small peaks balanced by small dips.

The plot of the Duette's lateral dispersion, referenced to the tweeter-axis response (which therefore is presented as a straight horizontal line), is shown in fig.5. By comparing this graph with fig.4, you can see that the small suckout between 3 and 5kHz in the on-axis frequency response (indicated by the cursor position in fig.5) fills in to the speaker's sides. This will give a neutral treble balance in all but very large rooms, where the Duette might sound a touch on the polite side. In the top octaves in this graph, the

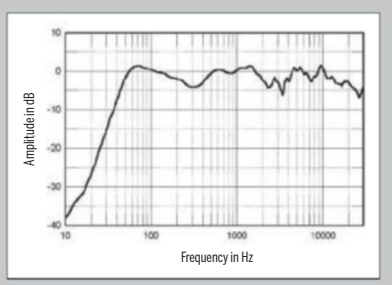


Fig.4 Wilson Duette 2, anechoic response on tweeter axis at 50", averaged across 30° horizontal window and corrected for microphone response, with complex sum of nearfield responses plotted below 300Hz.

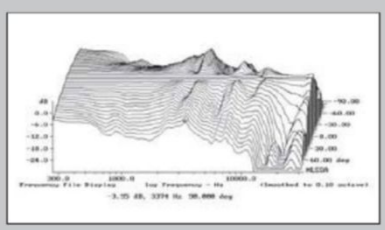


Fig.5 Wilson Duette 2, lateral response family at 50", normalized to response on tweeter axis, from back to front: differences in response 90–5° off axis, reference response, differences in response 5–90° off axis.

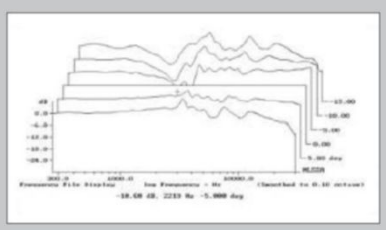


Fig.6 Wilson Duette 2, vertical response family at 50", normalized to response on tweeter axis, from back to front: differences in response 15–5° above axis, reference response, differences in response 5–10° below axis.

" Music is the space between the notes... " - Claude Debussy

Musicians know that leaving the right amount of space between notes creates connection, articulation and emotion. We get that, and it's why we developed the Black system.

Black's revolutionary design rethinks the audio system, reaching beyond traditional concepts. The Black system uniquely optimizes and controls the signal from any source, achieving unprecedented levels of dynamics, clarity, and performance.

Black communicates the notes, and equally the magic between the notes.

Black is the essence of the musical experience.

Black by bel canto

www.belcantoblack.com

off-band dispersion." His quest led to a convex soft-dome driver of his own design, manufactured by Scan-Speak and modified by Wilson in-house. This new tweeter is a distant variation on the Convergent Synergy tweeter Dave Wilson designed for his top speaker model, the Alexandria XLF: a driver "designed with the goal, particularly, to lower the high-frequency noise floor through the enhanced control of back-wave reflections." The bass driver uses an 8" pulp cone, and is also made by Scan-Speak.

The enclosure of the Duette Series 2 is made from machined sheets of two different quasi-phenolic laminates: Wilson's proprietary S material (which they describe as "a highly rigid, epoxy-based material") for the front baffle, and their X material for all other surfaces, including the upright portion of the companion stand. The top and bottom plates of the stand are made of aircraft-grade aluminum. The X and S panels are constructed with a cross-linked, thermosetting adhesive that Wilson says was chosen for its strength, stability, and vibrational characteristics. Most of the front baffle is covered with carefully shaped pads of wool felt, and on the rear panel is a reflex port about 3" in diameter and 6.25" long, lined with machined aluminum. Removable fabric grilles with frames of X material are supplied.

"I wanted to design a loudspeaker that would work in what we call a hostile environment."
—DAVID WILSON

Installation and setup

Despite being significantly smaller and lighter than most of its stablemates, each Duette Series 2 is shipped in a foam-lined wooden crate of generous size, as is each stand. Although two people are required to lift each crate out of the freight truck—they're too big for regular UPS service—and through the front door, it's *just* possible for one person to unpack the contents and reassemble the crates for storage. Apartment dwellers may have to bribe their building superintendents to find somewhere to store the empties.

The quality of the Duettes' packing and support materials—the latter include a selection of good-quality tools and setup accessories, and the most comprehensive owner's manual I have ever seen—was superb. In what I've come to regard as typical Wilson Audio fashion, every element exuded precision and sturdiness. The metallic blue paint of my review loaners was, as far as I could see, flawless. To echo a simile found in any number of reviews of other Wilson

measurements, continued

soft-dome tweeter's output drops off rapidly to the sides above 10kHz, which might lead to a slight lack of "air" to its balance in a well-damped room. In the vertical plane (fig.6), a significant suck-out develops in the crossover region 5° and more above the tweeter axis. But as the speaker's integral stand places its tweeter some 38" above the floor, and we've found that 36" is the height of a typical seated listener's ears, this won't be a problem.

As I was visiting Art Dudley, I could measure the Duettes' in-room response. As usual, I averaged 20 responses taken in a rectangular grid 36" wide by 18" high and centered on a position 36" from the floor at AD's listening position (AD actually sits a little higher), which was 136" from the speakers. The results are shown as the red trace in fig.7. (The blue trace is the in-room response of the DeVore Fidelity Orangutan O/96s, measured in the same room in 2012; see www.stereophile.com/content/devore-fidelity-orangutan-o96-loudspeaker-measurements.) As with other speakers that have been placed close to the corners of AD's room, there is a lack of energy between 150 and 300Hz that I suspect is due to destructive interference between the direct sound from the woofer and the reflections from the walls and floor. The two speakers produce curves that are very similar, with a smooth rolloff above the mid-treble, though the Duettes evidently produce more treble energy than the O/96s. The DeVore speakers were placed farther out in the room than the Wilsons, which means that the formers' low frequencies were better balanced. By contrast, there is a large peak between 50 and 80Hz in the Duettes' in-room response.

In the time domain, the Duette's step response on the tweeter axis (fig.8) is very similar to that of the Wilson Alexia, which I reviewed in December 2013. It reveals that while the tweeter is connected with positive acoustic polarity and the woofer in negative polarity, the decay of the tweeter's step smoothly blends with the start of the woofer's step, indicating an optimal crossover design that takes into account the slight backward slope of the front baffle. Some small ripples in the decay of the woofer's step are associated with some delayed mid-treble energy in the Duette's cumulative spectral-decay plot (fig.9).

Overall, the Wilson Duette's measured performance suggests that it is a well-engineered design optimized for use close to the wall behind it.

—John Atkinson

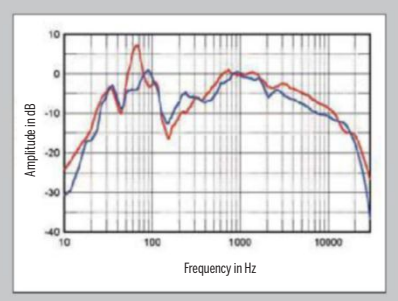


Fig.7 Wilson Duette 2, spatially averaged, 1/6-octave response in AD's listening room (red); and of DeVore Fidelity Orangutan O/96 (blue).

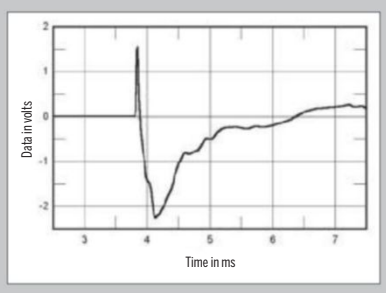


Fig.8 Wilson Duette 2, step response on tweeter axis at 50" (5ms time window, 30kHz bandwidth).

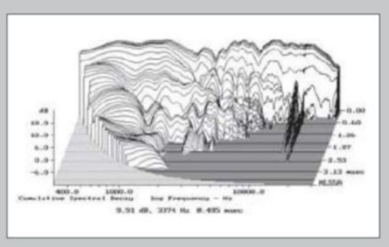


Fig.9 Wilson Duette 2, cumulative spectral-decay plot on tweeter axis at 50" (0.15ms risetime).

It's here. The redefinition of your audio and video experience. The Emotiva XMC-1 combines precision 7.2 HD surround decoding, balanced audiophile multichannel preamplification, and full 4K video management with the power of Dirac Live™. Whether you're running the latest movies or high-definition audio, get ready for the most powerful, immersive experience you've ever had.

The all-new XMC-1. Stunning performance now. Modular and upgradable for the future. Covered by a 5-year warranty. Designed and made in the USA at our Tennessee production center.

Redefine your experience with the XMC-1. $1999.

emotiva.com | 615.790.6754

EMOTIVA

models: Their products are the Ferraris of our industry.

Having emptied and stored the crates, I found the Duette 2s' installation and setup easy: I let someone else do it. So will virtually anyone else who takes possession of speakers made by Wilson Audio, whose dealers are trained in the task. As with my past reviews of Wilson products, the setup man was the company's sales manager, Peter McGrath, recordist extraordinaire and co-founder of Audiofon Records. It was McGrath who torqued each Duette to its stand, trimmed their treble response by installing on the backs of the crossovers the correct tweeter-level resistors, and, after an hour of so of listening and making notes, settled on the best spots for them in my room: Each speaker ended up 13" from its sidewall and 4.5" from the wall behind it, both distances measured from the portion of the enclosure nearest the wall. I joined McGrath for the final half-hour or so of fine tuning, in which we decided that the most natural balance was achieved with the loudspeakers toed-in to point almost but not quite directly at the centermost listening seat. I dispensed with the grilles for serious listening.

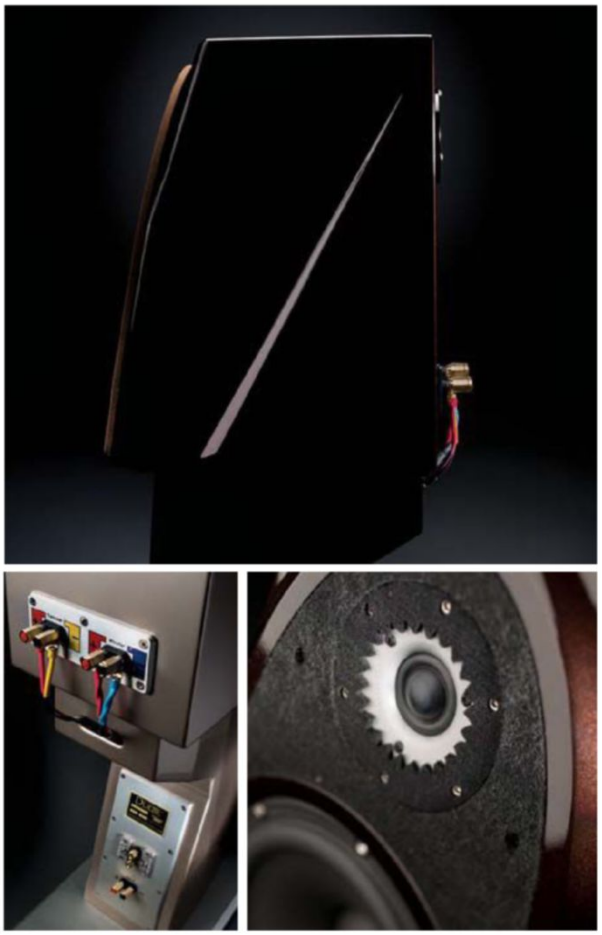
The Duettes spent most of their time in my dedicated listening room (19' long by 12' wide by 8' high), at the end of my usual system, in which phono sources and tube electronics predominate. My amplifiers of choice were Shindo Corton-Charlemagne monoblocks (25Wpc) whose output-transformer secondaries I'd reconfigured for a 4-ohm load. (Most contemporary Shindo amps have output transformers with only a single secondary, optimized for 16 ohms. The version of the Corton-Charlemagnes that I own use Hammond transformers, wiring diagrams for which are readily available on the Internet.) The Wilsons also spent a brief time in my living room (27' by 21' by 8'), driven by a Croft Phono Integrated amplifier, which I reviewed for *Stereophile* in October 2013[4] and subsequently purchased. I'd hoped to at least try the Wilsons on an actual bookshelf in the larger room—before I learned that the review samples' crossovers can't be separated from their stands.

The bass driver uses an 8″ pulp cone and is made by Scan-Speak. Wilson products are the Ferraris of our industry.

Listening

Because the Duette Series 2 is voiced to be installed within a few inches of the wall behind it, it's natural to ask if a pair of Wilson's smallest speakers can deliver the same spatial sophistication—in terms of imaging precision, the creation of an illusion of front-to-back depth, and so on—as the company's open-space designs. And because it's so small, some might also ask if the Duette 2 is capable of anything near the bass performance of its bigger siblings, all of which have far greater enclosure volume and bass-driver radiating area. Those questions turned out to be easy to answer.

In at least one key respect, the Duette Series 2 was the spatial opposite of the well-known Quad ESL-63[5] and other speakers that encourage nearfield listening. While the Quads are known for creating the illusion that center-fill information is originating from a place behind the plane of the loudspeakers themselves, the Duettes pulled the center forward, and at the same time allowed more distantly



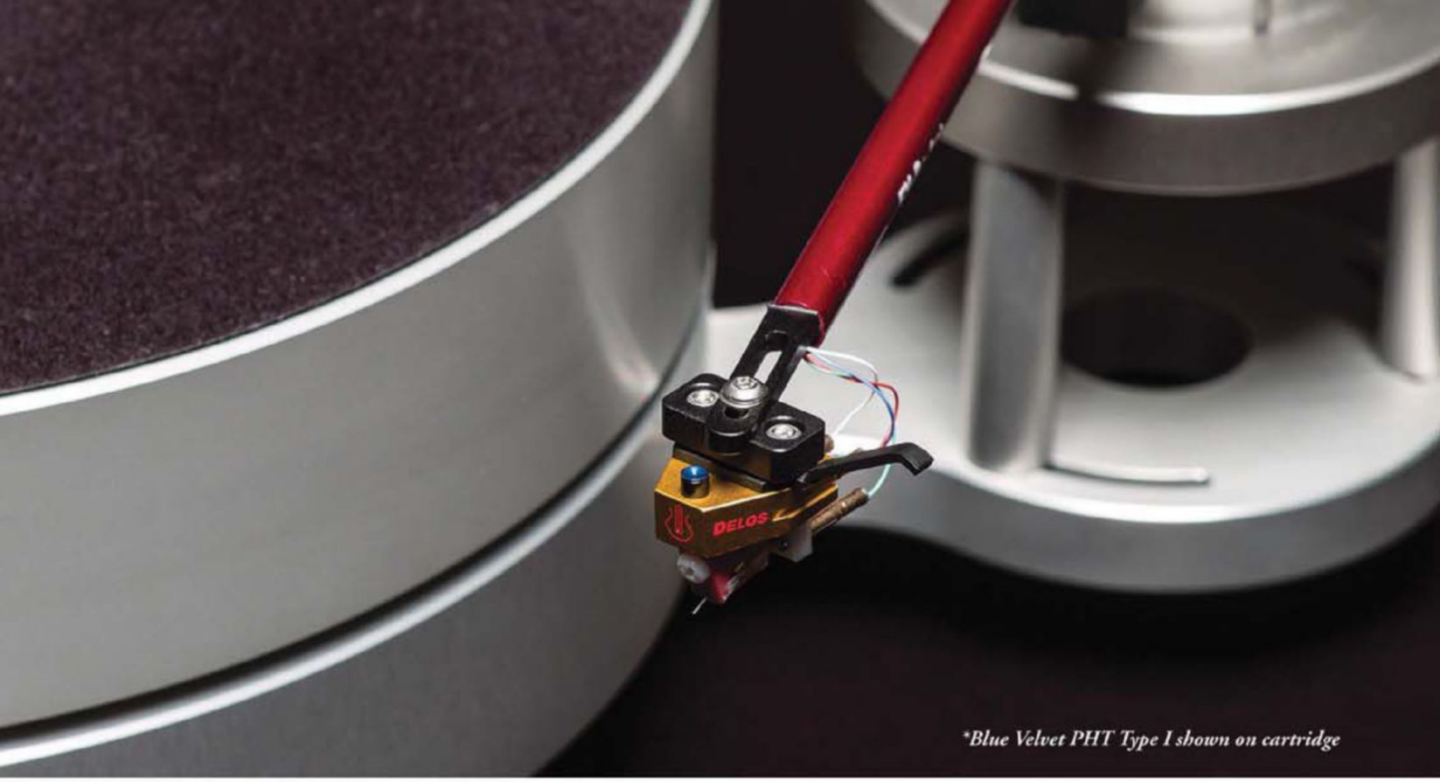
Every aspect of the original Duette design has been redesigned.

recorded instruments and voices to sound as if emanating from places behind the enclosures. I found the Duettes' spatial performance in this regard satisfying—an observation that must be taken with a grain of salt by those who are more-than-averagely concerned about "soundstaging," which I am not. I don't think the Duette Series 2 would *quite* satisfy the listener for whom the nearer-to-Quad experience is his system's reason for being.

The Wilsons lacked the ability of the Altec Valencias—or the Wilson Sophia Series 3s—to sound *really* big when desired. Otherwise, and with a wide range of stereo material, they sounded spatially correct and pleasantly substantial. The latter quality was especially evident with simple stereo recordings—such as the Electric Recording Company's fine new reissue of Jean-Marie Leclair's (1703–1777) Sonatas 1 and 3 for two violins, played by Leonid Kogan and Elizaveta Gilels (LP, EMI/ERC SAX 2531). The violinists appeared to be standing just a few feet from one another, toward the center of an imaginary stage, yet remained clearly distinct from each other—stereo playback

4 See www.stereophile.com/content/croft-acoustics-phono-integrated-integrated-amplifier.

5 Sorry for comparing the Wilson Duette with another audio product rather than to the sound of music itself. The fact is, a critic's observations about a recording that was miked in a certain way and played through speakers that were designed and installed in a certain way has little or nothing to do with how the average listener perceives live music from an average seat in an average concert space.



*Blue Velvet PHT Type I shown on cartridge

PHT GROWN IN CALIFORNIA
LEGAL IN ALL 50-STATES!

$125 each or $199 for both strains!

Transform your phono cartridge with PHT
Guaranteed Or your money back!

- Latest evolution of our award winning UEF Technology
- Transforms phono SQ- just place on or near phono cartridge
- Improves clarity, lowers noise floor, increases sound staging
- Comes in 2 different strains w 2 distinct sonic perspectives
- Type S PHTs are all about clarity and musicality
- Type I PHTs sound holographic and ethereal
- A new crop of PHTs will be released every 90-days
- No-risk 30-day money back guarantee

SYNERGISTIC RESEARCH

NEVER COMPROMISE • SYNERGISTICRESEARCH.COM

at its convincing best, in my opinion. When I felt like doing do, the Duettes rewarded close-up listening with an even greater sense of spatial depth; that said, I found the Wilsons more causally and comfortably convincing when enjoyed from a distance.

I'm far more concerned about low-frequency performance—and far more discriminating, even though my system is pocked with mild irregularities and the low-frequency comb-filter effects they produce. In my room, the Duettes' deep-bass power and extension were surprisingly good for their size. Cellos sounded subjectively undiminished down to their lowest tones, as did timpani and most double-bass notes, while nearly full weight was given to the orchestral bass drum—as in Sir Adrian Boult and the New Philharmonia's recording of Elgar's *The Dream of Gerontius* (LP, EMI SLS 987). With pop and jazz recordings, electric and acoustic bass notes were more rounded than taut, with a bit less tactile impact than I like, but with no sluggishness or other timing distortions. A few notes in the midbass seemed too prominent: the D-flat[6] and the notes around it played by bassist Oscar Pettiford in Coleman Hawkins's recording of "Chant," from *The Hawk Flies High* (LP, Riverside/Original Jazz Classics OJC-027), as well as certain bass notes on good piano discs, including Clifford Curzon's recording of Liszt's Sonata in b (LP, Decca/Speakers Corner SXL 6076). Again, this slight unevenness of response was very likely room related, perhaps excited by the near-boundary installation.

So ends the sermon on space and bass. Perhaps unsurprisingly, the Duette Series 2 had considerably more than the above in its arsenal—and was exceptionally good at sorting out details from within dense recordings, dense arrangements, and dense recordings of dense arrangements. Perhaps no better example exists than the Kinks' *Percy*, music written and recorded for the 1971 film of that title (LP, Pye NSPL 18365): On lesser gear, it's nearly impossible to tell if the arrangement for the album's single, "God's Children," uses an orchestra, a Mellotron or two, an organ, or some combination of the three. The Duette Series 2 revealed the answer: orchestra *and* organ, but no Mellotron. I hasten to add that the Duette's abundant detail came not at the cost of brightness: Its treble, in quantity and quality, was in perfect keeping with the rest of its range. Indeed, the Duette was also nearly miraculously good—and far better than my Altec Valencias—at keeping LP surface noise from intruding on my listening.

The Wilson didn't produce the same forceful note attacks as the Altecs, but otherwise did an admirable job of maintaining listener involvement by communicating other elements of *touch*: the sense of the bow pulling off the string at the end of a note, the bouncy feel given a line of notes when a flatpicking guitarist relies on pull-offs rather than constant picking in an effort to increase speed, and so forth. The Duette 2 also revealed good snap and wallop in plucked bass viols and well-recorded (*ie*, uncompressed) drums, as I heard in "My Kind of Love," from Ella Fitzgerald's *Ella Swings Lightly* (LP, Verve MG VS-6019). And when pushed to dynamic extremes, the Wilson did not flinch. The recording, by Josef Krips and the London Symphony Orchestra, of Schubert's Symphony 9 (LP, Decca/Speakers Corner SXL 2045) showed off the Duette's ability to maintain full-color, noncrunchy poise during the loudest fortissimos. The Krips Schubert drove the combination of Shindo Corton-Charlemagne amplifiers and Wilson Duette Series 2s to glorious heights: strain-free peaks of beautifully textured strings and thunderous drums, with good scale—and the sort of musicality whereby, from the very first notes, I was compelled to follow the melody. Background music this was not.

The Wilsons' performance with mono recordings was distinctive, and the first example that comes to mind is a reissue on vinyl of the eponymous, mono-only debut album by Procol Harum (LP, Regal Zonophone/Classic LRZ 1001). Through the Duettes, B.J. Wilson's kick drum didn't have quite the same taut impact as through my Altecs, nor did the Duettes have the older speakers' very grand scale. But the Duettes handily exceeded the Valencias in two key regards: their ability to pull the lead vocal forward of the rest of the mono mix—listening to Gary Brooker sing "She Wandered Through the Garden Fence" was a complete delight—and their overall vastly superior clarity and detail.

On the other side of this coin was the way in which the Duettes presented the Electric Recording Company's well-loved reissues of Johanna Martzy's legendary recordings of J.S. Bach's sonatas and partitas for unaccompanied violin. Listening through the Wilsons to the ERC disc containing Sonata 3 and Partita 3 (EMI/ERC 33CX 1288), I was impressed with the instrument's texture and color, not to mention the natural momentum in each line of notes. But the Duettes' spatial qualities didn't suit this distinctly and unusually *large* mono recording of a single instrument. Rather than the entirety of the sound on the LP being pulled forward, the violin's position was splashy and indistinct, sometimes sounding as if located at the speaker enclosures themselves—which was a bit odd, and not in keeping with the Wilsons' otherwise creditable performance with mono records.

On the whole, my thoughts on the Duette Series 2 are best summed up with a record that's something of an audiophile chestnut whose musical and sonic transcendence make its use by many modern show

ASSOCIATED EQUIPMENT

Analog Sources Garrard 301, Thorens TD 124 turntables; EMT 997, Thomas Schick tonearms; Ortofon SPU-A & SPU 95th Anniversary & CG25i, Miyajima Premium BE Mono II, EMT OFD 15 & TSD 15 pickup heads.
Digital Sources Halide Designs DAC HD USB D/A converter; Apple iMac G5 computer with Audirvana Plus 1.5.12 playback software; Sony SCD-777 SACD/CD player.
Preamplification Hommage T2 step-up transformer, Shindo Masseto preamplifier.
Power Amplifiers Shindo Corton-Charlemagne monoblocks, Shindo Haut-Brion.
Integrated Amplifier Croft Phono Integrated.
Loudspeakers Altec Valencia, DeVore Fidelity Orangutan O/96.
Cables USB: WireWorld Revelation 2.0. Interconnect: Audio Note AN-Vx, Nordost Blue Heaven, Shindo Silver. Speaker: Auditorium 23.
Accessories Box Furniture Company D3S rack (source & amplification components).—**Art Dudley**

6 Interestingly, this is approximately 69Hz—nearly identical to a frequency associated with my room's 8' ceiling height.

Abyss®

AbyssHeadphones.com

"I believe the Abyss AB-1266 has established a new benchmark for top-tier headphone performance."
Chris Martens- Hi-Fi+ Magazine

"What does the AB-1266 sound like? With good recordings you feel like you're in the room with the band; no other headphone can come close to producing that level of realism."
Steve Guttenberg- CNET.com

NEW! Kaptovator Lite™

JPS Labs®

.com

The differences made by the JPS Aluminata products were by far the most drastic changes I've ever heard when going from one interconnect, speaker cable, or AC cord to another. Put a little more bluntly, I've never heard wire do this before."
Art Dudley- Stereophile Magazine

The World's Finest Audio Products™

Tel- +1 716-714-5710
MADE IN THE USA

exhibitors understandable: Louis Armstrong's version of "St. James Infirmary," from Classic Records' reissue of *Satchmo Plays King Oliver* (LP, Audio Fidelity/Classic AFLP 1930). The first thing I noted was the Duette's fine musicality, in particular its lack of pitch ambiguity. Just as important, with the Duettes in place, my system retained its momentum and flow, the lack of same being a common failing of lesser gear with very slow numbers such as this—like a cyclist falling over when not maintaining speed.

The Duette's strong suit on this recording was the way in which it nailed the timbral colors of instruments and voice alike, with generous and very realistic saturation: Anyone expecting the clinical and often bleached-out reproductions of timbres by other modern high-end gear will likely be surprised by the smallest Wilsons. The trombone plays a major role in this recording, and its sound—and scale—were convincing; similarly, each note of the modal clarinet improvisations had sonic and emotional weight, and was presented with a clarity that kept the instrument from stepping on Armstrong's vocal lines. *Colorful clarity*—the phrase occurred to me often during my time with the Duettes, with this and other recordings.

In their spatial reproduction of the Armstrong recording, the pair of Duettes surprised and pleased. Scale was fine: never quite huge, but realistically big without being grotesque. Instruments and voices were spatially distinct from one another while maintaining excellent senses of solidity and humanness (as opposed, I guess, to ghostliness). Solo instruments and Armstrong's voice appeared to arrive from an area slightly in front of the speakers themselves, while drums and piano remained distant, as appropriate.

Best of all, the music didn't just lie still or flop over, as it does through so many modern speakers: The melody had real momentum and drive. Not just the sound, but the *music* was as exciting through the Duette 2s as through any other speakers I've heard.

Conclusions

Wilson Audio's Duette Series 2 is a specialized product: Not every audio enthusiast requires such a thing. That said, the Duette 2 is a specialized product that is especially *noteworthy* for fulfilling its singular task with degrees of competence and quality that make its superior difficult to imagine. And for $22,500/pair—an amount of money relatively few will ever be able to spend on a pair of small loudspeakers with stands, regardless of the patently obvious quality of the Duette's design, construction, finish, presentation, and support—that's precisely how it should be. That same amount of money will buy a pair of Wilson's Sophia Series 3s, which, as David and Daryl Wilson have said, is the preferable route for any hobbyist with enough space.

Loudspeakers designed for near-wall placement have come and gone over the years, offering different combinations of strengths. That the Duette Series 2 handily beats every one I've heard in terms of spatial performance will be germane to some; as far as I'm concerned, the more important consideration is the Duette 2s' overall musicality—their color, their clarity, their balance, and their ability to involve me as a listener, very much regardless of where they stand in the room. Space is valuable indeed, but musical pleasure is even more so—and on that count, the newest Duette looms large. Highly recommended. ■

JERRY RASKIN'S NEEDLEDOCTOR

Established 1979

WWW.NEEDLEDOCTOR.COM

2012 PRODUCT OF THE YEAR AWARD WINNER!

REGA RP6 TURNTABLE
WITH REGA EXACT CARTRIDGE

ONLY $1990.00

"I've had many turntables, some costing tens of thousands of dollars; but I've never had a combination that made me want to listen to records more"

- ANDY SCHAUB, Positive Feedback May/Jun 2012

2014 the absolute sound Editors Choice Awards

WHAT HI-FI? SOUND AND VISION AWARDS 2012

Hi-Fi Choice

2012 the absolute sound PRODUCT OF THE YEAR AWARDS

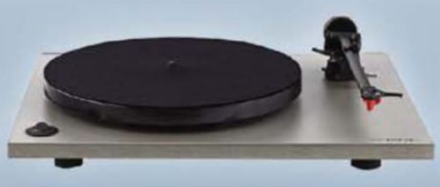
WITHOUT CARTRIDGE ONLY $1495.00

REGA RP10 TURNTABLE
$5,495

REGA RP8 TURNTABLE
$2,995

REGA RP3 TURNTABLE $895
*W/ELYS $1095

REGA RP78 TURNTABLE
$645.00 *78 RPM ONLY



REGA RP1 PERFORMANCE PACK
$640

REGA RP1 TURNTABLE
$449

ND

Toll Free 800.229.0644 | **Phone** 612.378.0543 | **Fax** 612.378.9024
Email info@NeedleDoctor.com | 6006 Excelsior Blvd., St. Louis Park, MN 55416

WORLD'S LARGEST SELECTION
OF TURNTABLES, CARTRIDGES, AND NEEDLES!

JOHN ATKINSON

DALI Rubicon 8

LOUDSPEAKER

Looking back at our September 2014 issue, I think my review of the Triangle Signature Delta loudspeaker[1] marked something of a watershed in the evolution of my taste in loudspeaker sound quality. For decades I have been a devotee of what might be called "British" sound: low coloration and, overall, a rather polite presentation, coupled with low sensitivity. The Triangle speaker opened my ears to what could be achieved with a very different approach: still-low coloration but high sensitivity, impressive clarity, and a hefty dose of what the late J. Gordon Holt called "jump factor," in which the leading edges of transients are neither smeared nor tamed. So when, last September, on a visit to Dallas and The Sound Organisation, the US distributor of Danish Audiophile Loudspeaker Industries (DALI), I encountered DALI's Rubicon 8 speaker,[2] which had benefited from a low-loss design philosophy similar to the Triangle's, I asked for a pair for review.

Across the Rubicon

At $7995/pair, the DALI Rubicon 8 is priced the same as Triangle's Signature Delta, and is also a slim, floorstanding design that loads each of its woofers with a separate ported chamber. There the similarities end. Where the three-way Triangle combines a horn-loaded tweeter with a midrange unit and two woofers, the DALI uses the unique combination of a larger-than-usual (1.15") soft-dome tweeter mounted below a small ribbon supertweeter and below that, three 6.5" woofers. However, only the topmost woofer continues its upper-frequency output to 2.5kHz, where it's crossed over to the dome tweeter. The middle woofer is rolled off earlier than the top one, and the bottom woofer earlier still. All three woofers operate in the bass, where the increased surface area will be necessary but the radiating area shrinks as the

1 See www.stereophile.com/content/triangle-signature-delta-loudspeaker.

2 See February 2015, p.22.

SPECIFICATIONS

Description "2½+½+½-way," five-driver, floorstanding loudspeaker with vented enclosure. Drive-units: 1.8" by 0.67" (45 by 17mm) ribbon supertweeter; 1.15" (29mm) soft-dome tweeter; three 6.5" (165mm) wood fiber-cone woofers. Crossover frequencies: 500Hz, 800Hz, 2.5kHz, 14kHz. Port tuning frequency: 33Hz. Frequency range: 38Hz–34kHz. Sensitivity: 90.5dB/2.83V/m. Nominal impedance: 4 ohms. Recommended amplifier power: 40–250W. **Dimensions** 43.5" (1100mm) H by 8.7" (220mm) W by 17.6" (444mm) D. Weight: 60.3 lbs (27.3kg). **Finishes** Walnut, Rosso, Gloss White, Gloss Black. Serial numbers of units reviewed 737-3016-L & -R. **Price** $7995/pair. Approximate number of dealers: 75. **Manufacturer** DALI A/S, Denmark. Web: www.dali-speakers.com. US distributor: The Sound Organisation, 159 Leslie Street, Dallas, TX 75207. Tel: (972) 234-0182. Fax: (972) 234-0249. Web: www.soundorg.com.

When's the last time they agreed on anything?

DirectStream DAC $5,999 MSRP

PSAUDIO.COM

Check out our forums, How To's, get Paul's Daily Posts, join our community. We're fun.

frequency rises. DALI calls this "2½+½+½-way construction."

All five of the Rubicon 8's drive-units are made by DALI. The tweeter and supertweeter are constructed on one chassis: a reworked version of the hybrid tweeter module that first appeared in DALI's flagship Epicon series. The ribbon tweeter operates above 14kHz, and is intended to widen the horizontal radiation pattern in the top octaves, to give a wider range of seating positions at which listeners can hear a full high-frequency balance.

The three 6.5" woofers are technically sophisticated, having been designed to minimize both harmonic distortion and stored energy. A problem with all magnets is that they suffer from hysteresis, in which the magnetization and demagnetization that result from the electrical drive to the voice-coil do not happen at the same speed. It takes longer to demagnetize than to magnetize the iron, which results in distortion. If a magnet could be made from a material that is highly susceptible to magnetization but is also an electrical insulator, the hysteresis and the resultant distortion would be very much reduced. What DALI calls their Soft Magnetic Compound (SMC) in the pole pieces is just such a material. SMC is formed from individual particles of iron—think dust—that are each coated with an insulating material. So while SMC is very highly magnetically conductive, it has a very low electrical conductivity: about $^{1}/_{10,000}$ that of iron, dramatically reducing hysteresis.

The woofer's pole piece is therefore constructed from SMC, surrounded with a copper cap, and energized by a large ferrite magnet. The copper ring minimizes the modulation of the magnetic field by the current fed to the voice coil. As in earlier DALI speakers, the woofer cone is formed from a matrix of wood fibers and terminated in a soft, low-loss rubber surround.

Electrical connection (left) is via two pairs of high-quality binding posts. The Rubicon 8's woofers (right) use wood-fiber cones and low-loss surrounds.

The Rubicon's cabinet is constructed from MDF, with the front baffle and rear panel gently radiused. The three ports on the rear panel are flared to minimize wind noise, and electrical connection is via two pairs of high-quality binding posts at the base of the rear panel. The lightweight, black-cloth grille is constructed on a plastic frame, but as the Rubicon 8s look extremely elegant without the grilles, I left them off for my listening.

Listening

The Rubicon 8s were set up in my room as recommended

MEASUREMENTS

I used DRA Labs' MLSSA system and a calibrated DPA 4006 microphone to measure the DALI Rubicon 8's frequency response in the farfield, and an Earthworks QTC-40 for the nearfield and spatially averaged room responses. My estimate of the Rubicon 8's voltage sensitivity was 89.8dB(B)/2.83V/m, which is both within experimental error of the specified 90.5dB and significantly higher than average. Though this is 2dB lower than the Triangle Delta Signature's sensitivity, the Rubicon 8 will still play loudly with low-powered amplifiers. Those amplifiers, however, should be comfortable with driving low impedances: the DALI's impedance is specified as 4 ohms, though the solid trace in fig.1 reveals that its impedance magnitude actually remains above 4 ohms at all audio frequencies, and varies very little above 100Hz. Other than a combination of 6 ohms and -38.5° at 81Hz, the electrical phase angle (fig.1, dotted trace) remains low above 100Hz.

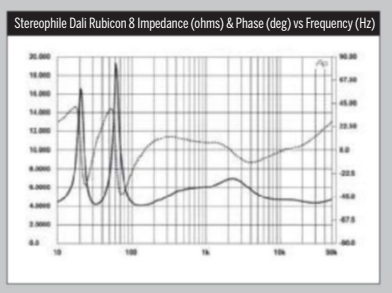


Fig.1 DALI Rubicon 8, electrical impedance (solid) and phase (dashed) (2 ohms/vertical div.).

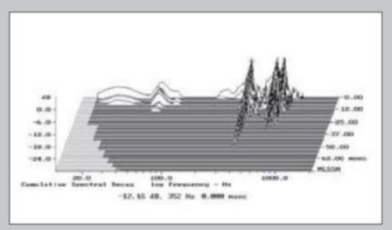
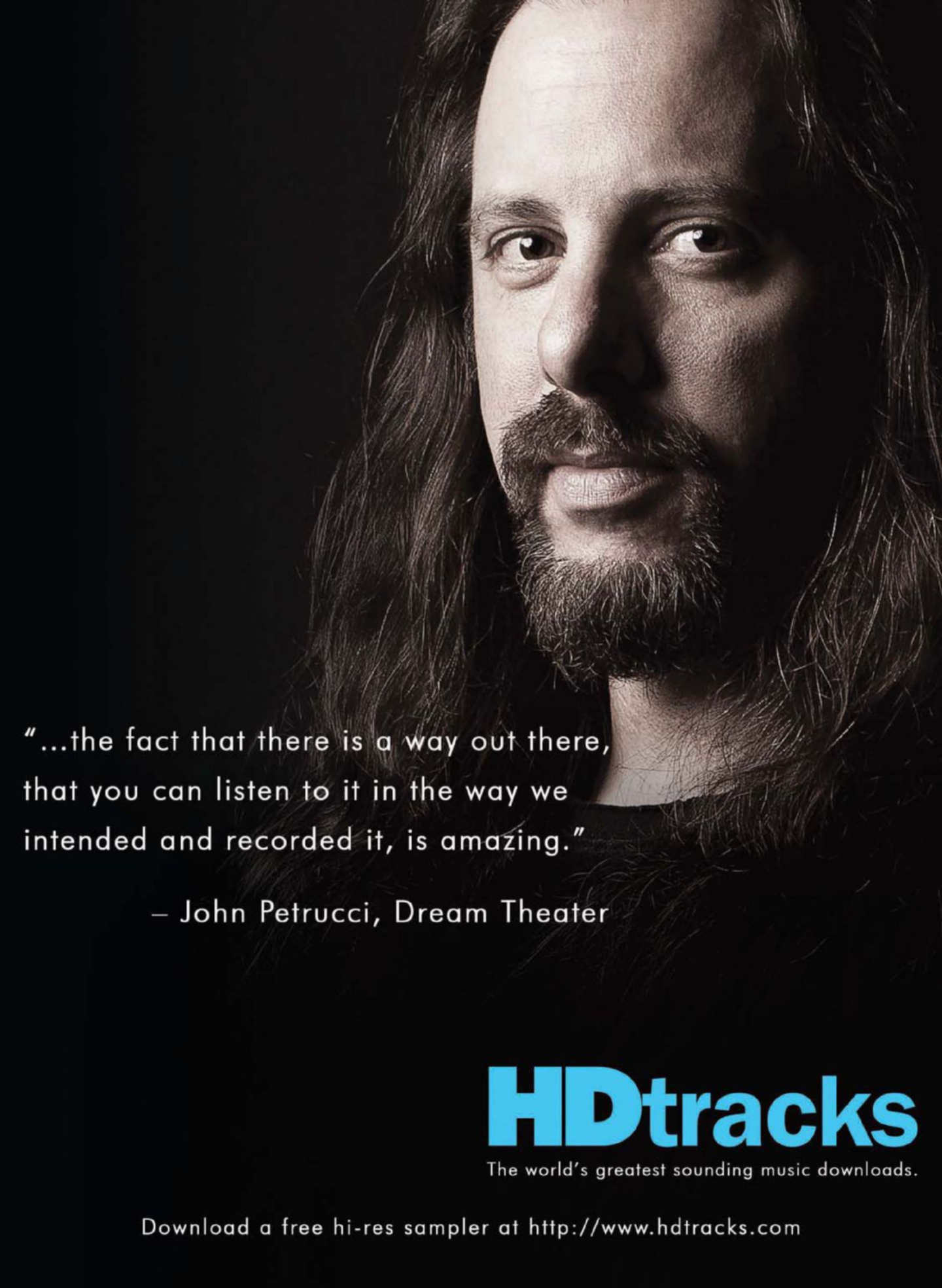


Fig.2 DALI Rubicon 8, cumulative spectral-decay plot calculated from output of accelerometer fastened to center of sidewall level with top woofer (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz).

Though the traces in fig.1 are smoothly continuous in the midrange, implying an absence of enclosure-panel resonances, I did find on the sidewalls, in places level with the uppermost woofer, modes at 355Hz, and between 600 and 700Hz (fig.2). The lower-frequency mode was present on all enclosure surfaces, and strongest on the small area of the gently curved baffle below the bottom woofer (not shown). I heard no congestion in the midrange that correlated with this behavior, though when I listened to the panels with a stethoscope, I heard all of these modes. The upper-frequency resonances may be associated with the port resonance noted below, and with the slightly clangy coloration I occasionally heard with piano recordings.

The saddle between 30 and 40Hz in the impedance-magnitude trace suggests that the three ports on the


"...the fact that there is a way out there,
that you can listen to it in the way we
intended and recorded it, is amazing."
– John Petrucci, Dream Theater
HDtracks
The world's greatest sounding music downloads.
Download a free hi-res sampler at http://www.hdtracks.com

by The Sound Organisation's David Carr: firing straight head (not toed in to the listening seat), and a little farther out from the wall behind them than I usually place speakers: 94" measured from the front baffles. This placed each tweeter 99" from my head, to describe an almost perfect equilateral triangle. My room is slightly asymmetrical, so the most-even transition from midbass to midrange was also achieved in a slightly asymmetrical manner: the dustcaps of the right speaker's woofers were 44" from the books that line the adjacent sidewall; the left speaker's woofers were 41" from the books and LPs that line that sidewall.

With my *Editor's Choice* (CD, Stereophile STPH016-2), the low-frequency, ⅓-octave warble tones were reproduced with full weight down to the 32Hz band. While the 40Hz tone was a little suppressed, as always with speakers with extended lows, the 32Hz warble tone was boosted by the lowest-frequency mode in my room. The 25Hz warble tone was just audible at normal listening levels, but the 20Hz was missing in action. But I was impressed by how clean the low-frequency tones sounded—this DALI woofer is indeed a low-distortion design. With the half-step–spaced toneburst track on *Editor's Choice*, the tones were reproduced cleanly from the midbass through the mid-treble, with less of the aliasing-like ghost tones audible than I usually hear.

It was time for some music. After watching the TV documentary on current-day musicians building songs on half-century-old lyrics by a younger Bob Dylan, I picked up a copy of *The New Basement Tapes: Lost on the River* (CD, Harvest 02537 95014). The overcooked, chromium-plated modern sound was a disappointment, as was hearing the backing instruments fighting both each other and the voices. However, the music is terrific, and when the mix was more open—as in "Kansas City," with music by Mumford & Sons' Marcus Mumford and Dawes's Taylor Goldsmith—I could appreciate the way the DALIs reproduced the driving rhythm of the drums. But the bass guitar in this track was overripe, as were the bass and kick drum in "When I Get My Hands on You," another gem from Mumford and Goldsmith.

Was this the speaker or the recording? As I write above, the Rubicon 8s were being helped out below 40Hz by the lowest-frequency room mode. When Eberhard Weber drops down to the bottom register on the E and A strings of his double bass on his *Endless Days* (CD, ECM 1748), the modest-sized Rubicon 8s reproduced his instrument with excellent body to the sound but also superb definition. And Rainer Brüninghaus's synthesizer-bass notes on this album sounded superbly clean, if a little on the rich side.

Disc 1 of the Hollies' *50 at Fifty* (3 CDs, Parlophone/Rhino RP222354) has most of the British band's hits, and while the midrange quality on these recordings is gritty, the DALI's clarity in the bottom octaves allowed to me to appreciate again, after five decades, what a great player Eric Haydock, the original bassist, was. Even on a harmonically simple song like Maurice Williams's "Stay," Haydock's bass lines, rendered with clarity and weight by the Rubicon 8s, are more complex than you might expect.

Was the Rubicon 8's treble balance being unkind to the vintage Hollies recordings? That combination of dome and ribbon tweeters is not backward about coming forward, but when I played a naturally balanced classical recording, such as the Takács Quartet's performance of the two

measurements, continued

rear panel are tuned in this region, and indeed, looking at the nearfield outputs of the three woofers does reveal that each has a sharply defined minimum-motion notch at 33Hz (fig.3, red trace). This is the frequency where the back pressure from the port resonance holds the cone still, all the acoustic output coming from the port. Though the woofers were tuned identically in this respect, the bottommost one begins to roll off above 200Hz and the middle one above 800Hz, leaving the top woofer to cross over to the tweeters (blue trace) at the specified 2.5kHz. The ports have very similar outputs, peaking between 20 and 60Hz, but there is a sharply defined peak at 700Hz in their summed response (green trace). This could be heard from behind the speaker with pink noise, but fortunately, the audibility of this resonance will be much reduced by the fact that the ports fire to the Rubicon 8's rear.

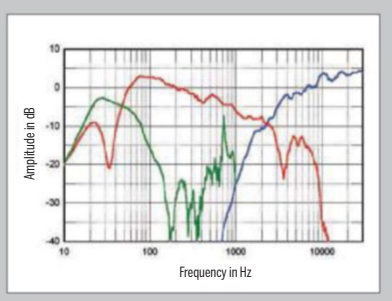


Fig.3 DALI Rubicon 8, acoustic crossover on supertweeter axis at 50", with summed nearfield responses of woofers (red) and ports (green).

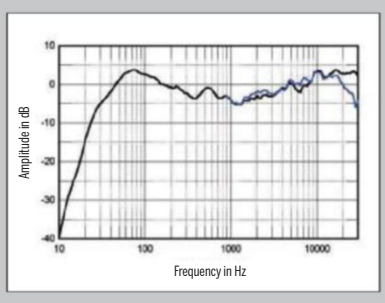


Fig.4 DALI Rubicon 8, anechoic response on supertweeter axis at 50", averaged across 30° horizontal window and corrected for microphone response, with complex sum of nearfield responses plotted below 300Hz (black); anechoic response 20° to side of supertweeter axis at 50", corrected for microphone response (blue).

Higher in frequency in fig.3, the crossover appears to have asymmetrical slopes, with the top woofer rolling off at an overall slower rate than the tweeters' 18dB/octave. The output of the tweeters continues to rise through their passband, which can also be seen in the graph of the Rubicon 8's farfield response on the supertweeter axis, averaged across a 30° horizontal window (fig.4, black trace above 300Hz). The black trace below 300Hz in fig.4 shows the complex sum of the woofer and port outputs, taking into account both acoustic phase angle and the different distances of the ports and woofers from a nominal farfield microphone position. The peak in the midbass will be due in part to the nearfield measurement technique, which assumes that the speaker is firing into a hemisphere rather a full sphere. But fig.4 also suggests that the Rubicon 8's low frequencies are balanced to sound rich, perhaps to balance the excess of top-octave energy seen in this graph.

The blue trace in fig.4 shows the Rubicon's farfield response 20° to the

The Best Computer Audio Gear and a Generous

60-DAY SATISFACTION GUARANTEE

musicdirect

800-449-8333 | MUSICDIRECT.COM

SONY HAP-Z1ES
High-Res Digital Audio Player
$1,999

MYTEK Stereo192
DSD DAC $1,595

PS AUDIO PerfectWave DirectStream
DSD DAC $5,995

BENCHMARK DAC2 HGC
DSD DAC $1,995

MICROMEGA MyDAC
$369

MARANTZ HD-DAC1 DAC/Headphone
Amplifier $799

CAMBRIDGE AUDIO DacMagic Plus
DAC/Preamplifier $499

2015 CATALOG

Get a FREE copy of our
new 234-page catalog

Call or visit our website

Brahms string quintets, recorded by erstwhile Decca engineer Simon Eadon and produced by an old colleague at *Hi-Fi News* magazine, Andrew Keener (ALAC files ripped from CD, Hyperion CDA67900), the high frequencies sounded in the correct balance, with the midrange and the violas and cello uncolored.

In fact, the Rubicon 8's reproduction of the top octaves was superb. Michael DiPasqua's cymbals at the opening of "Concert for Bass" on *Endless Days*, as Weber makes his lyrical solo entry, weren't exaggerated, the tick of the transients as DiPasqua plays the bell of the cymbal supported by quiet but well-defined ringing. Similarly, Steve Nash's cymbals in Kurt Weill's "Trouble Man," on Frank Kimbrough's *Quartet*, a jazz CD (Palmetto PM 2173) I bought after reading Fred Kaplan's enthusiastic review,[3] were reproduced with their metallic sheen intact. The dense mix in "The Call," once it gets going, with both Nash and bassist Jay Anderson verging close to overplaying, would sound muddled through lesser speakers but was well decoded by the Rubicons.

This album was recorded in Brooklyn at Systems Two, a studio I know well, and the piano sounds a little more characterful in the upper midrange than I was expecting from hearing that piano live. I reached for solo piano recordings, specifically the late Jorge Bolet's performance of Liszt's *Années de pèlerinage (Suisse)* (ALAC files ripped from CD, Decca 410-160-2), and another album I picked up on Fred's recommendation, Paul Bley's anagrammatically titled *Play Blue*[4] (CD, ECM 2373). The Bolet dates from 1983 and was recorded in London's Kingsway Hall; the Bley is a live recording from 2008.

Each of the Rubicon 8's woofers is loaded with its own port.

Fred has enthused over *Play Blue*'s sound quality, writing that it captures Bley's "crisp articulation, dynamic variations, and fine pedal work, as well as the ambience of the Norwegian hall." However, the piano sounded a touch too clangorous through the DALIs, and the sound was overlaid with some high-frequency fricatives: an *f-f-f-f* modulation noise that seemed to be emphasized by the ribbon supertweeters. By contrast, Bolet's Bechstein piano on the Liszt CD sounded magnificent overall, with excellent clarity and a natural midrange, other than a slight emphasis to some notes at the top of the treble staff. And both recordings were reproduced by the DALIs with superb weight to the instrument's left-hand register.

DALI specifies that the Rubicon 8's dome and ribbon tweeters are crossed over to each other at 14kHz. Covering the dome with my hand while I put my ear to the ribbon revealed that the latter carries very little signal, especially with instruments like Robert Silverman's Steinway on my recording of him playing Liszt (20-bit/44.1kHz AIFF master files for *Sonata*, Stereophile STPH008-2). But listening with the dome tweeters covered to Bolet's Liszt revealed that this early digital recording did suffer slightly from top-octave modulation noise and occasional spurious top-octave tones, though these were inaudible at

3 See www.stereophile.com/content/frank-kimbrough-quartet.
4 See www.stereophile.com/content/paul-bley-play-blue.

measurements, continued

speaker's side, which is the axis I sit on with the speakers firing straight ahead, as DALI recommends. Other than the increased rolloff above 18kHz, it is surprisingly similar to the black trace in this graph, confirming that the speaker does have wide horizontal dispersion.

Fig.5 shows the Rubicon 8's response plotted from 90° off axis on one side of the supertweeter axis to 90° off axis on the other side; fig.6 is similar except that it shows only the differences in response to the speaker's sides, which means that the on-axis response is plotted as a horizontal line. These graphs confirm that the Rubicon 8 has a horizontal dispersion that is both wide and well controlled, the latter evident in the even spacing of the contour lines. The slight off-axis flare in fig.6, indicated by the cursor position, is actually due to the small suckout centered on 6.5kHz in the on-axis response filling in to the speaker's sides. In the vertical plane (fig.7), the top-octave output shelves down 5° below the supertweeter axis. As the ribbon unit is 40" from the floor and the ear height of the average seated listener is 36", this will work against the speaker's top octave sounding exaggerated, as I found in my auditioning.

Fig.8 compares the Rubicon 8's

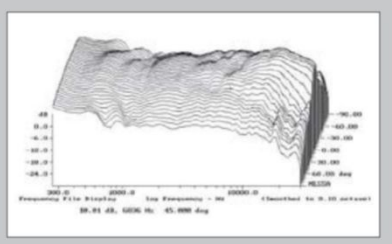


Fig.5 DALI Rubicon 8, lateral response family at 50", from back to front: responses 90–5° off axis, reference response, responses 5–90° off axis.

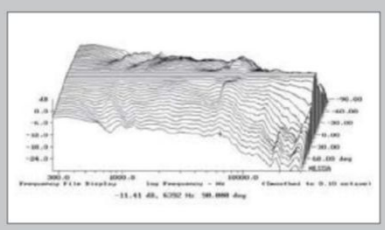


Fig.6 DALI Rubicon 8, lateral response family at 50", normalized to response on supertweeter axis, from back to front: differences in response 90–5° off axis, reference response, differences in response 5–90° off axis.

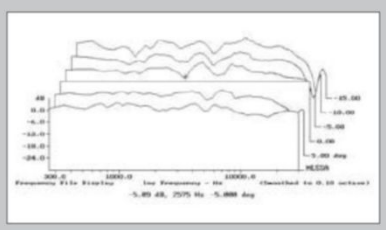
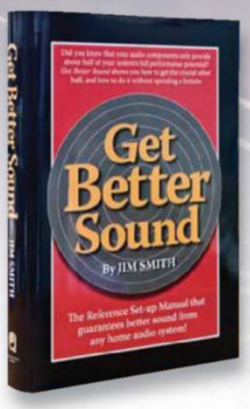


Fig.7 DALI Rubicon 8, vertical response family at 50", normalized to response on supertweeter axis, from back to front: differences in response 15–5° above axis, reference response, differences in response 5–10° below axis.

Our 5th Anniversary!!!
What it means for you...

Dear Reader,

It's been a great ride. Frankly speaking, it's hard for me to believe that it was five years ago (!) that ***Get Better Sound*** was first released.



Since that time, tens of thousands of audiophiles have made a significant improvement in the way their systems sound.

How do I know? It's all the wonderful e-mails and calls that I get every day from satisfied owners wishing to share their experiences.

Why the response?

From what I can tell, it's because the ***GBS*** book and DVDs are approachable and accessible. As are the free *Quarter Notes* newsletters—already equivalent in size and scope to another book—that come with the purchase.

Of course, none of that would be possible if the tips in ***GBS*** didn't actually work!

And here's the other thing that amazes me. Folks seem to be genuinely surprised that I answer their e-mails promptly. Who knew that basic courtesy would be held in such high regard?

No more incomplete advice

It saddens me that there is so much misinformation out there, especially on the Internet.

Here's an example—most audiophiles have adopted some set-up guide or other. There are lots of them available from various manufacturers. Interestingly, they ALL differ in concept and execution. But which one is correct? In my experience, they all have a portion of the truth, but none have the whole picture. It's incomplete.

If you ignore almost all of the 202 tips in ***Get Better Sound***, and you only focus on set-up tips #59-89 in the book, and/or on Disc 2 in the 3-disc DVD set, you could lift your system's performance substantially. It's not rocket science. It just requires a little commitment on your part.

The 10% rule

Another partial truth is related to various so-called rules—such as the "rule of thirds."

I've voiced countless systems that were set up with one of the set-up guides, or according to one of the "rules." In every case, we were able to dramatically elevate the performance of each system—simply by using the proven basic information from ***GBS***.

So I, with a little help from my clients, have developed the 10% rule. Any changes you might get from new electronics or cables—at any price—will equal perhaps 10% of what the improvement would be by simply applying the tips found in ***Get Better Sound***!

Celebration pricing

Guess I never thought about having a 5th anniversary sale. The ***GBS*** manual's regular price is $44.50, but during the Celebration Sale, it's just $29.80. Get similar savings on the DVD set, and save even more when they are purchased at the same time!

Your part

If you are ready for a real improvement in your system, visit **www.getbettersound.com**. For more information, contact me at jim@getbettersound.com or call 770-777-2095.

Best regards,

Jim Smith

Quarter Note Press
Publisher of ***Get Better Sound***
and the new ***Through the Sound Barrier***

Get Better Sound: Reference Set-up Manual, DVD, Quarter Notes, StraightTalk, and RoomPlay™ Custom Voicing.

Internet: www.getbettersound.com • Phone: 770-777-2095 • E-mail: jim@getbettersound.com

the listening position. Doing the same with *Play Blue* suggested that the fricative coloration was not modulation noise but was due to Bley's breathing.

With all recordings I played, the Rubicon 8s threw a solid, well-defined, impressively stable soundstage, with precise layering of image depth. I again reached for *Editor's Choice* and selected the dual-mono pink-noise track. My seat places my ears level with the Rubicon 8s' dome tweeters, and from this position the pink noise sounded smooth, with no emphasis of any particular frequencies. If I sat upright, so that my ears were level with the ribbon unit, the top octave sounded a tad separated from the mid-treble. The Rubicon 8s produced a very narrow central image with pink noise, without any "splashing" of that image to the sides at some frequencies. Moving my head from side to side, I could hear some slight comb filtering—something Gordon Holt used to call "vertical venetian blinding"—but the treble balance changed very little. This is a wide-dispersion speaker.

Summing Up

The world of relatively affordable tower speakers has become increasingly competitive, whether they be 3-way, 2½-way, or, like the DALI Rubicon 8, 2½+½+½-way. In recent issues, we have published reviews of superb-sounding models from Bryston, DeVore Fidelity, Focal, GoldenEar, KEF, Monitor Audio, Revel, and Vienna Acoustics, as well as of the Triangle speaker I mentioned at the beginning of this report. DALI's clear, clean, uncolored Rubicon 8 joins that group of high-performance loudspeakers, each of which shines light on the music from a slightly different direction, and all of which are highly recommended. ■

ASSOCIATED EQUIPMENT

Analog Sources Linn Sondek LP12 turntable with Lingo power supply, Linn Ekos tonearm, Linn Arkiv B cartridge.
Digital Sources Ayre Acoustics C-5xe^{MP} universal player; Apple 2.7GHz i7 Mac mini running OS10.10.1, iTunes 11, Pure Music 2.0, Audirvana Plus 1.5.10; PS Audio Perfect-Wave DirectStream, Ayre Acoustics QB-9 D/A processors; dCS Vivaldi upsampling D/A system; Ayre Acoustics QA-9 USB A/D converter.
Preamplification Channel D Seta L phono preamplifier; Pass Labs XP-30, Ayre Acoustics KX-R Twenty line preamplifiers.
Power Amplifiers Pass Labs XA60.5, Ayre Acoustics MX-R Twenty (both monoblocks).
Loudspeakers KEF LS50.
Cables Digital: AudioQuest Coffee, Belkin Gold USB, Kubala-Sosna Elation! AES/EBU, Transparent USB (with dCS Vivaldi). Interconnect (balanced): AudioQuest Wild Blue (with PS Audio/dCS), Cardas Clear (with Ayre). Speaker: Kubala-Sosna Elation! (with Pass Labs), Cardas Clear (with Ayre). AC: Kubala-Sosna Elation!, manufacturers' own.
Accessories Target TT-5 equipment racks; Ayre Acoustics Myrtle Blocks; ASC Tube Traps, RPG Abffusor panels; VPI Bricks, Shunyata Research Dark Field cable elevators; APC S-15, Audio Power Industries 116 Mk.II & PE-1 AC line conditioners (hard drive, computers). AC power comes from two dedicated 20A circuits, each just 6' from breaker box. **—John Atkinson**

measurements, continued

spatially averaged, 1/6-octave response at the listening position in my room (red trace) with that of the KEF LS50 that preceded it in that room (see my Follow-Up review in the January 2015 issue, p.137). The two speakers' responses are very similar in the midrange and low treble. However, the DALI has significantly more energy in-room between 3kHz and the current limit of my hearing, just below 15kHz. That I was only occasionally aware of this excess is explained by what happens in the bass, where the Rubicon 8 has more energy apparent below 200Hz, which will tend to balance the speaker's upper-octaves output. Note also that the close coincidence between the resonant frequency of the reflex ports and the frequency of the lowest-frequency mode in my room gives rise to a significant boost between 20 and 40Hz that is not ameliorated by the spatial averaging.

In the time domain, the Rubicon 8's step response on the supertweeter axis (fig.9) suggests that its supertweeter and woofers are connected in inverted acoustic polarity, its tweeter in positive polarity. However, the decay of the tweeter's step smoothly blends at the 4ms mark with the negative-going start of the woofers' step, implying optimal crossover design. Correlating with DALI's "low-loss" concept, the Rubicon 8's cumulative spectral-decay plot (fig.10) is one of the cleanest I have seen, with no ridges of delayed energy visible above the midrange.

This loudspeaker's measured performance indicates a careful balance of its design parameters to produce a seductive yet clean full-range sound—as I heard in my listening room.
—John Atkinson

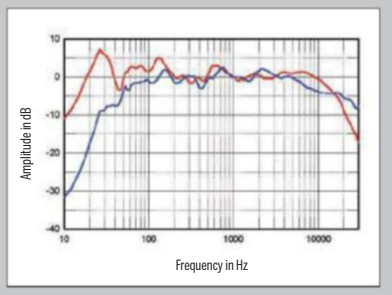


Fig.8 DALI Rubicon 8, spatially averaged, 1/6-octave response in JA's listening room (red); and of KEF LS50 (blue).

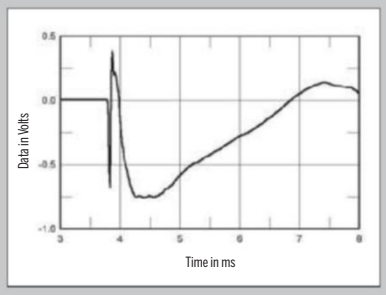


Fig.9 DALI Rubicon 8, step response on supertweeter axis at 50" (5ms time window, 30kHz bandwidth).

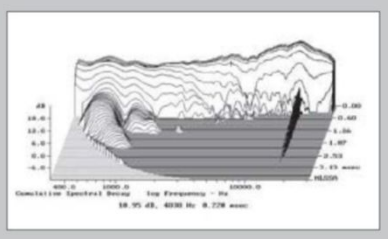


Fig.10 DALI Rubicon 8, cumulative spectral-decay plot on supertweeter axis at 50" (0.15ms risetime).

JERRY RASKIN'S NEEDLEDOCTOR

Established 1979

WWW.NEEDLEDOCTOR.COM

Pro-Ject authorized REFERENCE PHONO - PARTNER

PRO-JECT REFERENCE PHONO PARTNER

NEW PRO-JECT DEBUT CARBON DC TURNTABLE

ONLY $449.00

- INCLUDES ORTOFON 2M RED CARTRIDGE
- CARBON FIBER TONEARM
- AVAILABLE IN 7 COLORS

Hi-Fi Choice RECOMMENDED ★★★★★

EISA Best Product 2012-2013 TURNTABLE Pro-Ject Debut Carbon

WHAT HI-FI? SOUND AND VISION ★★★★★

TONE Audio Magazine 2012 Exceptional Value Award

2014 the absolute sound Editors' Choice Awards

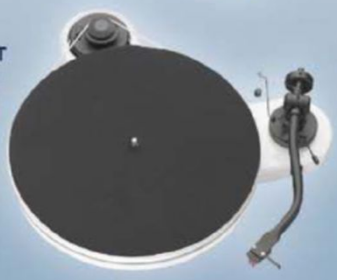
PRO-JECT XTENSION 9
$2,499

PRO-JECT 2 XPERIENCE CLASSIC
$1,299

PRO-JECT XPRESSION CARBON CLASSIC
$999

PRO-JECT RM5.1SE
$999

PRO-JECT RPM1.3
$499



PRO-JECT ESSENTIAL II
$329

ND

Toll Free 800.229.0644 | **Phone** 612.378.0543 | **Fax** 612.378.9024
Email info@NeedleDoctor.com | 6006 Excelsior Blvd., St. Louis Park, MN 55416

WORLD'S LARGEST SELECTION
OF TURNTABLES, CARTRIDGES, AND NEEDLES!

FOLLOW-UP

BY JOHN ATKINSON

THIS ISSUE: A firmware upgrade improves the PS Audio DirectStream's measured performance.

PS AUDIO PERFECTWAVE DIRECTSTREAM D/A PROCESSOR

Art Dudley received the v.1.1.4 firmware upgrade for PS Audio's PerfectWave DirectStream[1] toward the end of his time with this superb-sounding, DSD-capable D/A processor, so was able to write only a brief report on the change this made to the review sample's sound.[2] "For those who've waited for a computer-friendly DAC that offers, with every type of music file, the best musicality of which DSD is capable, the PerfectWave DirectStream may be in a class by itself," he concluded. In my own auditioning of the PS Audio with the v.1.1.4 firmware, I was also impressed by its sound, feeling it had a smooth quality that made the otherwise excellent-sounding Luxman DA-06 D/A processor, which AD reviewed in July 2014,[3] sound a touch too immediate in direct comparisons.

However, my measurements had revealed some problems in the PS Audio DAC, even with what was then the latest version of the firmware. In particular, I was bothered by the DirectStream's ultimate lack of resolution with data capable of higher-than-CD resolution, and by the poor linearity at low frequencies. When I discussed these issues with PS Audio's Ted Smith and Paul McGowan last October, at the 2014 Rocky Mountain Audio Fest, they told me that because the DirectStream's data processing is performed by Field-Programmable Gate Arrays (FPGAs) rather than by dedicated chips, these problems

could be addressed with a firmware upgrade. That update, v.1.2.1, was already available for download before RMAF,[4] and as Robert Deutsch had just purchased a DirectStream DAC, I asked him to write a Follow-Up comparing the sounds of v.1.1.4 and v.1.2.1. That enthusiastic Follow-Up appeared in our February 2015 issue (p.129); meanwhile, as I still had the original review sample, I upgraded its firmware and got it up on my test bench.

As always, I performed the tests with my Audio Precision SYS2722 system (see the January 2008 "As We See It," http://tinyurl.com/4ffpve4), which had just been returned from Audio Precision for service and recalibration. As before, all the measurements were performed from the processor's balanced outputs with the volume control set to its maximum.

Fig.1 shows the spectrum of the DirectStream with v.1.1.4 firmware while it decoded 24-bit data representing a dithered 1kHz tone at –90dBFS, plotted from –60dBFS downward. Fig.2 shows the spectrum with the v.1.2.1 firmware. You can see that both the noise floor and the already low-level power-supply products at the left of fig.1 have dropped by 3–5dB with the new firmware. Perhaps more important, figs. 3 and 4 compare the PS Audio's reproduction of a dithered 1kHz tone at –120dBFS with the old and new firmware. With v.1.4.1, the fundamental tone was suppressed by 5dB, and it was the second harmonic that peaked at –120dBFS. With v.1.2.1, the 1kHz tone peaks at the correct level, which suggests a significant improvement in low-level linearity.

Figs. 5 and 6 similarly compare the spectra of the DirectStream's output

1 The PS Audio PerfectWave DirectStream DAC costs $5999. PS Audio, 4826 Sterling Drive, Boulder, CO 80301. Tel: (720) 406-8946. Web: www.psaudio.com.

2 See www.stereophile.com/content/ps-audio-perfectwave-directstream-da-processor.

3 The Luxman DA-06 costs $4990. See www.stereophile.com/content/luxman-da-06-da-processor.

4 See Paul McGowan's and Ted Smith's comments on the reasons for the upgrade, as well as reactions from owners, at www.psaudio.com/forum/directstream-all-about-it/biggest-single-upgrade-just-released/.

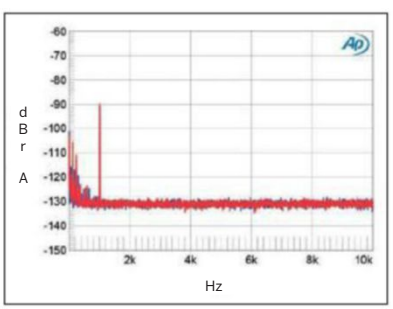


Fig.1 PS Audio DirectStream, v.1.1.4 firmware, spectrum with noise and spuriae of dithered 1kHz tone at –90dBFS with 24-bit data (left channel blue, right red; 10dB/vertical div.).

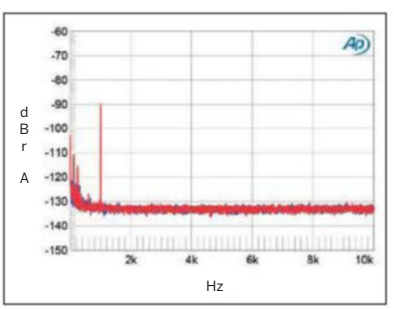


Fig.2 PS Audio DirectStream, v.1.2.1 firmware, spectrum with noise and spuriae of dithered 1kHz tone at –90dBFS with 24-bit data (left channel blue, right red; 10dB/vertical div.).

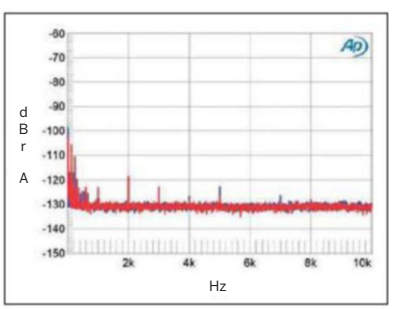


Fig.3 PS Audio DirectStream, v.1.1.4 firmware, spectrum with noise and spuriae of dithered 1kHz tone at –120dBFS with 24-bit data (left channel blue, right red; 10dB/vertical div.).

JERRY RASKIN'S NEEDLEDOCTOR

Established 1979

WWW.NEEDLEDOCTOR.COM

ENJOY VINYL AGAIN!

MUSIC HALL MMF 5.1 TURNTABLE

ONLY $875.00 / NOW AVAILABLE IN RED AND WHITE FOR $995.00

"So good it's laughable! The **MMF-5** is a 'plug and play' design you can have up and running in 10 minutes. [...] It's a gateway drug into the intoxicating world of analog playback. Get hooked... you'll never go back!"

- MICHAEL FREMER, Stereophile

2006 the absolute sound EDITORS' CHOICE AWARDS

stereophile RECOMMENDED COMPONENT

stereophile MICHAEL FREMER RECOMMENDED

JERRY RASKIN'S NEEDLEDOCTOR ★★★★★ 5-STAR CUSTOMER REVIEW

editors' choice the absolute sound 2005

MUSIC HALL MMF-7.1 TURNTABLE W/O CARTRIDGE
$1,295

NEW MUSIC HALL IKURA
*Available in black or white
$1,195

MUSIC HALL MMF-5.1SE
$1,095

MUSIC HALL MMF-2.2LE
$499

MUSIC HALL MMF-2.2WH
$499

MUSIC HALL MMF-2.2
$449

ND

Toll Free 800.229.0644 | **Phone** 612.378.0543 | **Fax** 612.378.9024
Email info@NeedleDoctor.com | 6006 Excelsior Blvd., St. Louis Park, MN 55416

WORLD'S LARGEST SELECTION
OF TURNTABLES, CARTRIDGES, AND NEEDLES!

while it drives a full-scale 50Hz tone into 100k ohms with the two firmware versions. With v.1.1.4 (fig.5), the second harmonic reaches a high –43dB (0.7%) and the third harmonic –52dB (0.2%). By contrast, with v.1.2.1 (fig.6), both harmonics have dropped to –60dB (0.1%) or below, and the higher-order harmonics visible in fig.5 are also much lower in level. While the v.1.1.4 version's linearity was better at high frequencies than at low frequencies, v.1.2.1 was even better. The spectra of the upgraded PS Audio's output while it decoded an equal mix of 19 and 20kHz tones (fig.7) revealed that the difference tone at 1kHz had dropped by more than 10dB, to –90dB (0.003%), and that the noise floor was cleaner than it had been with the earlier firmware.

The measured reduction in low-frequency distortion with the v.1.2.1 firmware is dramatic, the improvement in resolution less so but still worthwhile. Kudos to PS Audio for designing a product so that its performance can so easily be upgraded by its customers. The new firmware is a gift to end users that will keep on giving.**–John Atkinson**

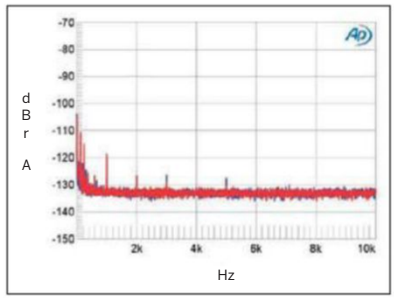


Fig.4 PS Audio DirectStream, v.1.2.1 firmware, spectrum with noise and spuriae of dithered 1kHz tone at –120dBFS with 24-bit data (left channel blue, right red; 10dB/vertical div.).

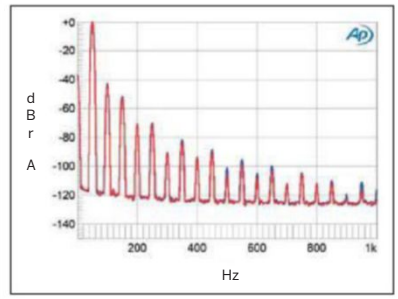


Fig.5 PS Audio DirectStream, v.1.1.4 firmware, spectrum of 50Hz sinewave, DC–1kHz, at 0dBFS into 100k ohms (left channel blue, right red; linear frequency scale).

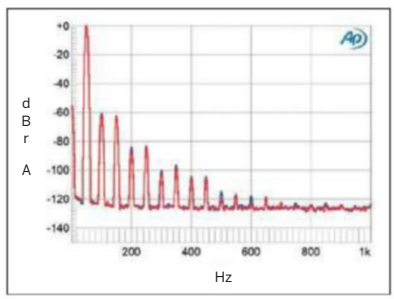


Fig.6 PS Audio DirectStream, v.1.2.1 firmware, spectrum of 50Hz sinewave, DC–1kHz, at 0dBFS into 100k ohms (left channel blue, right red; linear frequency scale).

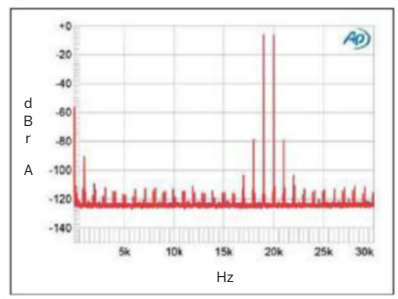


Fig.7 PS Audio DirectStream, v.1.2.1 firmware, HF intermodulation spectrum, DC–30kHz, 19+20kHz at 0dBFS into 100k ohms (left channel blue, right red; linear frequency scale).

CUTTING EDGE COMPUTER (AND ANALOG!) AUDIO
AXPONA 2014 - BEST SOUND AWARD, Cost no Object - The Absolute Sound
•PURE MUSIC® Channel D's Acclaimed, High Resolution (Including Native DSD) Audiophile Quality Digital Music Player Software
The Absolute Sound - Golden Ear Award
Positive Feedback - Brutus Award
STILL ONLY $129
"Pure Music is a bargain." - John Atkinson
•PURE VINYL™ Linking LP Playback with High-Resolution (192/24) Digital Audio
Stereophile - Product of the Year Award
The Absolute Sound - Product of the Year Award
The Absolute Sound - Editors' Choice Award
•SETA® Means "Silk" in Italian: Phono Preamplifiers from Channel D
Stereophile - "CLASS A" Recommended Components 2010 - 2014
NEW Seta Piccola - DC to 1 MHz (-3 dB), Balanced, Battery Powered, MM/MC - Perfect for use with Pure Vinyl
Download reviews and FREE Demo Software: www.channel-d.com

elusive disc

A Trusted Name Since 1989!

Find all your hot music & gear at www.elusivedisc.com

What you can expect from us:

- Excellent Customer Service.
- Speedy & Safe Delivery.
- Expert Help & Advice.
- The Best in Audio Equipment!
- Great Selection of Music from ABBA to ZZ Top!

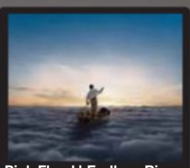
Three Blind Mice Box Set
Impex 180g 45rpm 6LP Box Set

The Mahler Project
SFS 180g 23LP Box Set

Led Zeppelin!
WEA 180g Dlx LPs & CDs

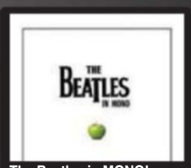
Chasing The Dragon
Audiophile 180g LP, 45 & CD

Vanessa Fernandez I Use Me
Groove Note 180g 45rpm 2LP & SACD

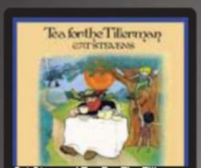


Pink Floyd I Endless River
Sony 180g 2LP & Deluxe CD/DVD

Bob Dylan I Shadows In The Night
Sony LP & CD

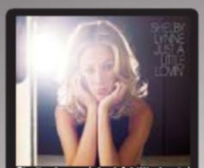


The Beatles in MONO!
Capitol 180g 14LP Box & Indvl Titles



Cat Stevens I Tea For The Tillerman
Analogue Productions 200g 45rpm 2LP

Jeff Beck I Blow By Blow
Analogue Productions 200g 45rpm 2LP



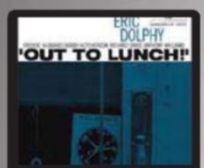
Shelby Lynne I Just A Little Lovin'
Analogue Productions 200g 45rpm 2LP

Beach Boys I Pet Sounds
Analogue Productions 200g LP

Offenbach I Gaite Parisienne
Analogue Productions RCA 200g LP

Julie London I Julie Is Her Name Vol. 2
Analogue Productions 200g 45rpm 2LP

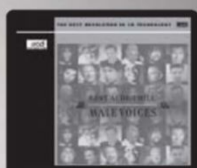
Miles Davis I Kind Of Blue
Music On Vinyl Blue Vinyl 180g LP



Music Matters Blue Note
180g 33 1/3rpm LPs

Supertramp I Crime Of The Century
Universal 180g LP & Blu-Ray Audio

Audio Wave Music
Blue Note XRCD24s



Best Audiophile Voices
JVC XRCD2

Hi-Q Records Classical
XRCD24s & 180g LPs

Diana Krall I Wallflower
Universal 2LP

Guess Who I Best Of
Audio Fidelity M-CH SACD

Eric Clapton I Rainbow Concert
Audio Fidelity 180g LP

Lyn Stanley I Potions
A.T. Music 180g 45rpm 2LP & SACD

Johnny Cash I American Recs I-VI
Universal 180g 7LP Box Set

Meat Loaf I Bat Out Of Hell
Sony K2 HD Mastering CD

A plethora of products to make your precious music collection sound better than the day you bought it!

www.elusivedisc.com **Call Today! 800-782-3472**

fax: 765-608-5341 Info: 765-608-5340 • 4020 frontage rd anderson, in 46013 • sales@elusivedisc.com • m-f 9-6 sat 11-3 est

RECORD REVIEWS

EDITOR'S PICK

RECORDING OF THE MONTH

ESTRELLA MORENTE
Amar en Paz

Calle 54/Sony Music 88875011922 (CD). 2014. Fernando Trueba, prod., exec. prod.; Nat Chediak, exec. prod.; Jose Luis Crespo, eng.; Jim Anderson, mix; Alan Silverman, mastering. DDD? TT: 66:29

PERFORMANCE ★★★★½
SONICS ★★★★½

What makes a great singer great is a magical combination of virtuosic physical skills with mental and emotional powers of interpretation that allow you to hear and feel a lyric's subtext: the emotions the songwriter hoped to evoke by a turn in the melody.

"Because love is the saddest thing / When it stays behind . . ." Singing those lines from the title track of *Amar en Paz* (To Love in Peace), the latest from the inventive team at the Spanish label Calle 54, flamenco singer Estrella Morente—most famous in the US for having been the singing voice of Penélope Cruz in the film *Volver*—spins a very personal emotional web, and in the process creates a cross-lingual masterpiece. The song's original Portuguese title is "O Amor em Paz"; it was written by famed Brazilian songwriter Antonio Carlos Jobim, and translated into Spanish by the Spanish producer Fernando Trueba. It fulfills the vision for this record that Trueba and his partner and coproducer Nat Chediak, from Cuba, hoped they could create.

While dancing is the most flamboyant part of flamenco, and the guitar adds the instrumental fire, it's the singing, or *cante*, that embodies and projects the music's actual soul. Estrella Morente is the daughter of one of the most influential of all flamenco singers, the late Enrique Estrella. Here, accompanied only by the great flamenco guitarist Niño Josele (who in 2006 recorded *Paz*, a record of Bill Evans tunes, for Calle 54), Morente creates her own rhythms, singing long, haunting lines in a stark rendering of another Jobim tune, "Dindi": "Oh, Dindi, / if you knew how much I love you / the world would be, Dindi, / everything, Dindi, / beautiful, Dindi, / Oh, Dindi."

Reached at his home in Biscayne Bay, Florida, Chediak explained the concept behind *Amar en Paz*: "This is boundaryless music. Estrella's just interpreting the music as she feels it, and I think that's what makes it special. It's not just that you have an artist from a different country, from a different continent, interpreting the repertoire in a different language—it's just the way she is understanding it. It isn't a flamenco date and it isn't a Brazilian date, but it is a meeting of a flamenco artist with Brazilian music, so it's a little bit of both and it's neither. The concoction winds up being a one-off, if you will, without betraying the music whatsoever. It's a sensibility that's closer to jazz than pop. Jazz is all about interpretation, and this is closer to that."

Recorded in Madrid in five sessions in May and June of 2014, *Amar en Paz* was mixed at Avatar Studios, in Manhattan, by Jim Anderson, and mastered at Arf! Digital by Alan Silverman. Anderson has become the label's mix engineer of choice. "Fernando and I view Jim as the elephant in the room, so to speak: the one without whom we dare not venture," Chediak said. "We see him more as a musician than an engineer, even though he has very gifted ears and just a wonderful sense of place, aurally—where everything belongs in the general soundscape of the record. He's an artistic collaborator in every date that we do."

Of the sound on *Amar en Paz*, Anderson said, "The trick is to make everything sound natural, and as if I had done nothing—yet doing 'nothing' took about 20 hours! To get the guitar to support the voice, and then let it naturally take over when the solo appears . . . there's nothing natural about it. Moving up the guitar to overtake the vocal and not make it 'heard' is, I feel, quite an accomplishment. There's some light EQ, some slight compression, and about four subtle reverbs in play in the final mix, all sounding as if they should have been there in the first place."

Lyrically, *Amar en Paz* covers two sides of the same coin: love and the lack of love. The tempos tend toward the slow and sad, which gives Morente plenty of room to improvise vocal lines, as in Paulinho da Viola's "Baile del Desamor" ("Dança da Solidão," or Heartbreak Dance). She toys with expectations, deftly skipping across stark lines in an intriguing contrast of subject and tempo: "Solitude is lava / that covers everything / It's the bitterness in my mouth / a gold-toothed grin / Solitude's a word / nailed in a heart / that is mute and resigned / to the beat of disillusion." An unusual project with intriguing results that will appeal to fans of both vocal music and Latin fusion, *Amar en Paz* is the kind of adventurous project that fills Calle 54's 12-album catalog. "We record music that is outside the box, that touches upon different genres and traditions, that perhaps unconsciously breaks new ground in the process," Chediak said. "It's not experimental music in any sense of the word. We're moved by the pleasure of making someone's life a little more enjoyable for 60 minutes—nothing more ambitious than that."**–Robert Baird**

"The word that best describes the sound is balanced...a balance of the various sonic attributes most valued by audiophiles."

-Robert Deutsch, *Stereophile*

Wharfedale

– www.wharfedaleusa.com –

---

iFi

ADD THE RICHNESS OF TUBES

– To Any System –

iFi iTube Tube Buffer
$299

musicdirect

800-449-8333 | MUSICDIRECT.COM

ROCK/POP

WILL BUTLER
Policy

Merge MRG540 (CD). 2015. Will Butler, prod.; Ben Baptie, Mark Lawson, Jeremy Gara, engs. AAD? TT: 27:12

PERFORMANCE ★★★☆☆
SONICS ★★☆☆☆

Arcade Fire fans expecting something Arcade-esque from Will Butler will likely be disappointed, or at least thrown off, by Butler's solo debut. Although he has an upper-register singing style that will recall older brother and fellow A.F. member Win Butler, only one track of the dozen that make up Policy can really be likened to the anthemic music that is Arcade Fire's stock-in-trade. That the exuberant, shouty "What I Want" isn't even close to being the best tune here potentially bodes well for the younger Butler, who has already shared an Oscar nomination (with A.F. collaborator Owen Pallett) for Best Original Score, for *Her* (2013).

Policy is all over the musical map—Butler, a radio deejay in college, knows his genres. There's thumping, Nuggets-style garage rock ("Take My Side"), synth-driven '80s electro-pop (the Cars-meet-Human League "Anna"), stately piano balladry ("Finish What I Started"), and strummy-folky upbeat indie rock ("Son of God").

This scattershot, kitchen-sink approach is simultaneously the album's charm and its undoing. As catchy and hooky as the songs can be, the haphazard production leaves *Policy* sounding somewhat listless; Butler is not so much forging a unique identity as at times coming across like just another indie forager in search of a Pitchfork review. Still, when he's on, he's definitely at the top of his game, distinguishing himself from the mothership that pays his bills; "Take My Side" and, in particular, "Anna" illustrate his considerable gifts as a pop craftsman. Think of *Policy* as a calling card, and the promising start of what we can only hope will be a fruitful solo career.—**Fred Mills**

DUKE GARWOOD
Heavy Love

Heavenly HVNLP111 (CD). 2015. Duke Garwood, prod.; Alain Johannes, prod., eng.; Mark Lanegan, eng. AAD? TT: 41:14

PERFORMANCE ★★★★☆
SONICS ★★★☆☆

England's Duke Garwood is a veteran of a slew of bands you never heard of (Pushpanjali, Inchworm, Tenebrous, Little Wet Horse), but it's the forty-something songwriter's more recent connections and collaborations that've caused the public to take notice. Serendipity drew Garwood into the orbits of Mark Lanegan and the Afghan Whigs' Greg Dulli (aka the Gutter Twins) and of Alain Johannes (Queens of the Stone Age), and by 2013 he found himself cutting his fifth solo album, *Black Pudding*, with Lanegan. This set the stage for the Johannes-helmed *Heavy Love*, a remarkable foray into atmospheric blues and swampy pop.

Like Chris Whitley, with less National Steel and more tremolo-powered jazz licks, Garwood creates humid, sometimes dark, sometimes dreamy soundscapes that pulse with relentless, almost sensual purpose. "We catch fire in the pouring rain," he mutters in "Sometimes," his desire palpable. Later, in the voodoo-rocking "Snake Man," he advises his paramour, simply, "Let's take our sweet time—my back is yours." And hold that Lanegan thought: at times, Garwood's low-throated vocals are so coal-black you'd be forgiven for flunking a blindfold test and thinking it *was* Lanegan at the mike. He's not as gravelly, though, and his signature part-whisper, part-moan gives his tunes an uncommon, all-enveloping intimacy. The vibe is akin to gathering in the basement of an old stone dwelling while the house band clusters together in the corner, picking through obscure folk blues. Think "catacombs" more than "soundstage" and you've just about got it. This love ain't merely heavy—it's downright *haunted*.—**Fred Mills**

THE GRATEFUL DEAD
Dave's Picks Vol. 12: Colgate University, Hamilton, NY, 11/4/77 Seneca College Field House, Toronto, Ontario, 11/2/77

Rhino R2-541136 (3 CDs). 1977/2014. Grateful Dead, prods.; Betty Cantor-Jackson, eng. ADD. TT: 3:43:06

PERFORMANCE ★★★★½
SONICS ★★½☆☆

Central New York was a tough place to lay down counterculture roots in 1977, but if there was one place you could do it, it was in Hamilton, New York. The Grateful Dead show at Colgate on November 4 of '77 was a wild one, inspired in part by an audience fueled by the 600 hits of microdot blotter acid that hit Main Street just in time for the test of the semester.

It had been a rough year for the band, with drummer Mickey Hart sidelined for several months after being injured in a car wreck, and guitarist Bob Weir accidentally shot by writing partner Bruce Barlow, but the band was revved up by this point, and working into their setlists material from the just-released *Terrapin Station*. The Colgate show began in utter chaos, with only Jerry Garcia's guitar prominent; the vocals were completely buried in the mix. They stumbled into "Good Lovin'," and Garcia took over with a brilliant solo that kicked the band into another gear. But the vocal difficulties continued through a desultory set until an inspired "Let It Grow."

Something interesting must have happened at halftime, because the band came back smoking, and fortunately, the mix was in better shape for a spirited "Samson and Delilah." Garcia was taking no prisoners as the set careened into a nonstop eight-song medley that included "Eyes of the World," "Estimated Prophet," "The Other One," and "Stella Blue," all bookended by a raison d'être "Playing in the Band." This is Captain Trips Garcia at his mind-melding best.—**John Swenson**

ANNIE LENNOX
Nostalgia

Blue Note B002176702 (CD). 2014. Annie Lennox, prod.; Mike Stevens, prod., eng.; Cameron Craig, eng. AAD?. TT: 42:35

PERFORMANCE ★★★★½
SONICS ★★★★½

Although it isn't altogether novel for a Brit to do a deep dive into the American songbook (Roxy Music's Bryan Ferry does it with aplomb, while Rod Stewart sounds like he wants to be heard in elevators everywhere), it's unusual for an artist to pull it off with as much conviction as Annie Lennox. On *Nostalgia*, the onetime Eurythmic tackles a dozen songs with copyrights ranging from 1930 to 1956, and breathes new life into every one.

Beginning with "Memphis in June," Lennox constantly reminds us why she's been one of the most pure and powerful singers since the 1980s. And she's never sounded more emphatic than on *Nostalgia*, recorded shortly before her 60th birthday. Throughout the album, her voice, her ringing piano, and her rocking band sound as if they're right there with you in the living room. Her soaring vocal gymnastics beautifully transform Screamin' Jay Hawkins's "I Put a Spell on You" and the Gershwins' "Summertime," sounding light-years away from versions by Hawkins and Billy Stewart, respectively. The most heart-wrenching performance is "Strange Fruit," a song whose depictions of lynchings in the South caused some to contemplate suicide after hearing Billie Holiday's 1939 recording. Lennox's version is also bone chilling—and sadly contemporary.

Nostalgia ends on a more upbeat, horn-driven note with Duke Ellington's "Mood Indigo" (1930). Sultry and boozy, Lennox's version pulsates with Crescent City charm, both nostalgic and contemporary. And, like the entire album, it gracefully melts away the years.—**David Sokol**

VARIOUS ARTISTS
The Rise & Fall of Paramount Records, Volume Two, 1928–1932

Third Man/Revenant TMR204 (6 LPs, USB drive). 2014. Alex van der Tuuk, Jack White, Dean Blackwood, prods.; Christopher C. King, David Glaser, Anna Frick, remastering. AAD. TT: 4:29:46 (LPs only)

PERFORMANCE ★★★★★
SONICS ★★★½

The second and concluding volume in Third Man Records and Revenant Records' sumptuous Paramount Records retrospective is formatted much like the first: six LPs, a hardcover and a paperback book, and a USB drive containing 800 tracks plus period advertisements, packaged this time in an art-deco aluminum case. Although some of the rarer sides are scratchy, the sound quality is better than on Vol.1, mostly because recording techniques improved after Vol.1's time frame of 1917–27. The main difference, however, is that while Vol.1 strikes a rough balance among blues, jazz, country, and gospel, Vol.2 is thoroughly dominated by the blues, including Delta classics by Son House, Tommy Johnson, Skip James, and Charley Patton.

Seven of House's 10 known pre–World War II tracks, perhaps the most spine-tinglingly intense blues of all, are featured, but Johnson cut his most influential sides for Victor a couple of years before his Paramount session, and his tracks here, while still strong, are less affecting. The set contains all 18 of Skip James's prewar sides, among them the virtuosic "I'm So Glad," later popularized by Cream, and "22-20 Blues," the basis for Robert Johnson's "32-20 Blues." And it includes nearly 50 seminal tracks by arguably the greatest Delta bluesman, Charley Patton, constituting his entire recorded output as a soloist or leader except for the dozen tracks he later cut for Vocalion. There are also tracks by lesser-known colleagues of these four, such as Ishman Bracey, Rube Lacy, and Willie Brown.

Other important blues artists represented include the Beale Street Sheiks, Big Bill Broonzy, Blind Blake ("Diddie Wa Diddie"), Bumble Bee Slim, Blind Lemon Jefferson, James "Stump" Johnson ("The Duck-Yas-Yas-Yas"), Lottie Kimbrough, the Mississippi Sheiks, Little Brother Montgomery ("Vicksburg Blues"), Ma Rainey, Blind Joe Reynolds ("Outside Woman Blues"), "Mr. Freddie" Spruill, Roosevelt Sykes (recording under the name Dobby Bragg), as well as the boogie-woogie pianists Charles Avery, Cow Cow Davenport, Will Ezell, Meade Lux Lewis ("Honky Tonk Train Blues"), and Charlie Spand.

Many artists are little known, some so obscure that their identities are uncertain. Just who exactly *were* King Solomon Hill, Walter Hawkins, Johnnie Head, Jack O'Diamonds, Star Page, Frank Palmes, Six Cylinder Smith, Sluefoot Joe, or the Too Bad Boys? Two obscure blueswomen who recorded together deliver haunting performances: Elvie Thomas's "Motherless Child Blues" and Geeshie Wiley's "Last Kind Words Blues." Little-known musicians suggest the roots of rock'n'roll in Will Ezell's "Pitchin' Boogie" and the Dixie Four's "Kentucky Stomp."

Country music, jazz, and gospel enjoy lesser but still impressive representation. Among the country artists are Emery Arthur ("Man of Constant Sorrow"), Dock Boggs, and the Kentucky Ramblers (who later became the Prairie Ramblers), but the real revelation is Wilmer Watts and the Golden Eagles, who plumb the depths of Americana in tracks such as "Banjo Sam" and "Sleepy Desert." The jazz tracks are sparse but hot, highlighted by the Dixie-Land Thumpers, featuring the brothers Johnny and Baby Dodds, and Clarence Williams & His Orchestra, featuring King Oliver. As for gospel, the Biddleville Quintette, Delta Big Four, Famous Blue Jay Singers of Birmingham, and more deliver sweet, sometimes ragged harmonies, while the Revs. Emmet Dickenson ("Is There Harm in Singing the Blues"), Moses Mason, B.L. Wightman, and others give fervent sermons.

The six LPs, generally compiled from the least scratchy sides, achieve an eminently listenable stylistic balance, if not among different genres, at least among different varieties of blues. But the sequencing on the USB drive is annoyingly arbitrary, a slight drawback to an otherwise awesome collection.
—**Larry Birnbaum**

JAZZ

KEITH JARRETT TRIO
Hamburg '72

Keith Jarrett, piano, soprano saxophone, percussion; Charlie Haden, bass; Paul Motian, drums, percussion
ECM 2422 (CD). 1972/2014. Michael Naura, orig. prod.; Hans-Heinrich Breitkreuz, orig. eng.; Manfred Eicher, prod., remix; Jan Erik Kongshaug, remix. AAD. TT: 55:22

PERFORMANCE ★★★★½
SONICS ★★★½

This radio broadcast, recorded before an audience in Hamburg, Germany in 1972, is the fourth and final album by Keith Jarrett's trio with Charlie Haden and Paul Motian, the respective bassist and drummer for Ornette Coleman and Bill Evans. The best recording available of Jarrett's first professional band, it's the only one that sounds fully mature. It's worth buying for "Rainbow" alone, a ballad by Jarrett's first wife, Margot: a rhapsodic solo-piano intro of wildly intelligent runs and relentless modulation that never lose contact with the changes, followed by delicate, attentive ensemble playing, then another healthy piano solo. Jarrett's solos thrill with his willingness to follow his impulses of rhythm, harmony, and modulation wherever they lead, and the flawless technique that makes it all possible. "Rainbow" sums up everything on which Jarrett built and has sustained his long, unique career: solo improviser, band leader, band *member*, and a seamless blend of gospel, blues, jazz, standards, classical. And that's just track 1.

Things to know: It's easy to forget how well Jarrett plays soprano sax ("Piece for Ornette"). Motian had perhaps the most supple, nuanced, *open* rhythm of any drummer in jazz: the feeling that he's only just keeping the pulse builds a wonderfully relaxed tension. Haden's playing is freer than in later years, less bound by compulsive ostinatos; his 15-minute "Song for Ché" meanders, with longueurs of twittering percussion from Motian and Jarrett, but even here, as throughout *Hamburg '72*, there's a feeling of freedom and freshness, of anything being possible, then made real in sound.

That sound lacks ECM's usual richness (highs are a bit harsh), but it's alive and atmospheric, convincingly sounding like three musicians playing in a spacious venue. For a radio broadcast more than 40 years old, remarkable. Highly recommended.—**Richard Lehnert**

PHOTO: JIMMY KATZ

David Lewis Audio LTD
THE FINEST IN HIGH END AUDIO
welcomes Audio Research and Dan D'Agostino

Accuphase	Dan D'Agostino	Primaluna
Acoustic Signature	Dr. Feikert	Primare
Aerial	Electrocompaniet	Project
Aesthetix	Eggleston	Rogers
AMG	Gensis	Simaudio
ATC	Hegel	SME
Audio Physic	Jadis	Soulution
Audioquest	Kimber	Sonus Faber
Audio Research	Joseph	Spendor
BAT	Lamm	TAD
Bel Canto	Luxman	Thiel
Boulder	Monitor Audio	Totem
Burmester	Naim	Verity
Canton	Nagra	Vienna
Chord	Nola	Vivid
Conrad Johnson	Nordost	VAC
DCS	Octave	YG Acoustics
Dynaudio	Peak Consult	Zesto

8010 Bustleton Avenue. Philadelphia PA, 19152
215-725-4080
www.davidlewisaudio.com
davidlewisaudio@gmail.com

MANUFACTURERS' COMMENTS

THIS ISSUE: Ultra Systems/Audiodesksysteme, DigiBit, Pioneer, Boulder, and PS Audio comment on our reviews of their products.

Audiodesksysteme Vinyl Cleaner

Editor:

We are grateful to Art Dudley for his thorough report on the Audiodesksysteme Vinyl Cleaner, and happy to have provided him with some "wow" moments this winter.

He mentions that development of the Vinyl Cleaner may have taken quite some time. In fact, it was four long years. The first prototype, about six months in, was a somewhat primitive "brute force" ultrasonic machine, actually quite similar to a couple of ultrasonic-only machines currently available on the market from other companies. But brute force and the LP don't mix well, as Art's descriptions of the teeny-tiny size of the groove modulations point out, and so began three more years of R&D to reduce the ultrasonic power that needed to be applied for safe yet effective LP cleaning.

The addition of four rotating, microfiber-covered barrels as the primary means for the surface cleaning of fingerprints, etc., allowed for a significant reduction in ultrasonic wattage, and also serves an important fluid-management function by wicking the ultrasonic agitated rubbish away from the LP surface into the cleaning solution, where it can be filtered. Another reduction in the need for ultrasonic power was achieved through introduction of a cleaning solution surfactant, to make the distilled water a better solvent when used in conjunction with the ultrasonic process.

Add a fluid filter to clean the recirculating cleaning solution, and air filters to collect airborne dust, which would otherwise be blown back onto the wet surface of the LP during the drying cycle, and you basically have the current machine: a fully automated record-cleaning robot, just as the Jetsons surely promised!

Art mentioned that he wished for adapters to allow for the cleaning of 7" and 10" discs in the Vinyl Cleaner. Not as easy as it sounds, because of the wide variance in the actual diameters of these discs, but good news: In conjunction with Vinh Vu, a Vinyl Cleaner user and the acrylics master at Gingko Audio, we are several prototypes into development of such adapters.

Robert Stein
Ultra Systems,
Distributor for Audiodesksysteme

DigiBit Aria

Editor:

DigiBit greatly appreciates working with *Stereophile*'s organization, and for the review of the Aria network server by Kal Rubinson. We are pleased that Kal found the Aria's multichannel capability one of pure enjoyment! The Aria is very unique as an audio server because of its full feature set, ease of use, and especially because the Aria does not require a PC for operation of *any* regular feature. As a result, no PC knowledge or PC ownership is required to enjoy the Aria server! DigiBit has therefore written proprietary commands for many features of JRiver and dBpoweramp. Advanced feature options those companies may offer, if requested, are accessible and configurable remotely by the retail dealer.

The Aria is very flexible, as owners are offered hardware options based on their own personal system and storage needs. In addition to the iAria iPad control application, our Android app for the Aria is expected in March. Our extended metadata field support, which Kal has highlighted, is available for *any* genre, not only for classical music. When used with an Internet connection, the Aria is currently the only server on the market that can rip a CD and automatically populate up to 18 fields of related metadata. The support for extended fields also allows for intelligent search by filtering two or more fields. Example: search Beethoven (Composer) and music performed by Barenboim (Soloist), or search Blues (Genre) with Guitar (as the dominant instrument). Our sincere thanks for *Stereophile*'s focus on the Aria's multichannel feature, ripping capability, and expandability, and for a highly objective product review!

Juan Perez, CEO
DigiBit Madrid

PS Audio PerfectWave DirectStream

Editor:

Thanks for taking the time to measure the DirectStream's improved performance. Development of the DirectStream was guided by our ears, but it was thoroughly gratifying in this instance to have the increased clarity, lower noise, and lower distortion that we heard confirmed by significantly improved test measurements.

With the DirectStream's ability to be updated and essentially "rewritten" in the field, we truly feel as though we've entered a new era in audio design—one in which obsolescence itself is obsolete, and owners are assured that the state-of-the-art component they buy will *remain* the state of the art.

We think that's pretty cool. Thanks again for your efforts, and your kudos are truly appreciated.

Paul McGowan, Ted Smith
PS Audio

Pioneer PLX-1000

Editor:

There is an entire DJ community that continues to use vinyl because they love the concept and feel of a moving platter associated with traditional turntables. Turntable users will definitely appreciate what we've put into developing the PLX-1000, and that we have stuck to the true philosophy of vinyl.

David Arevalo
Director of Marketing,
Professional Sound and Visual Division
Pioneer Electronics (USA)

Boulder Amplifiers 2110

Editor:

We would like to thank Michael Fremer and the staff of *Stereophile* for the thorough and in-depth review of the 2110 preamplifier. Over the years, we've done everything we can to avoid creating products with any kind of sonic signature, instead trying to create equipment that has no sound of its own, in order to allow our customers to hear what the recording was intended to sound like. The artists should be deciding what their recordings sound like, not audio-equipment designers. As we told Jason Victor Serinus a while back, "If we had absolutely no house sound, we'd be happy." Mikey gets it, and gets it across to your readers rather well.

Something to clarify: The 2110's "billboard" display is useful in large rooms where it's desirable to see what the display reads. In addition, the remote will also work from well over 30' away. As we get older and need a little visual help, this seems to be a pretty popular feature.

Otherwise, we'd simply like to invite everyone to listen to the 2110 for themselves!

Rich Maez
Director, American Sales and Marketing
Boulder Amplifiers

JERRY RASKIN'S
NEEDLEDOCTOR
Established 1979

WWW.NEEDLEDOCTOR.COM

INDUSTRY LEGEND!

KIMBER KABLE HERO AUDIO INTERCONNECTS ▸

ONLY $219/ meter pair

"Correctly presenting the harmonic structure and emotion of the actual performance, as well as giving you holographic imagining, detail and bass impact."

KIMBER KABLE
TIMBRE AUDIO
INTERCONNECTS
$147 meter pair

KIMBER KABLE
PBJ AUDIO
INTERCONNECTS
$117 meter pair

KIMBER KABLE
TONIK AUDIO
INTERCONNECTS
$84 meter pair

KIMBER KABLE

HANDCRAFTING CABLES SINCE 1979

KIMBER KABLE 8TC SPEAKER CABLE
$413 8ft pair

KIMBER KABLE 4TC SPEAKER CABLE
$235 8ft pair

KIMBER KABLE 8VS SPEAKER CABLE
$193.80 8ft pair

ND

Toll Free 800.229.0644 | **Phone** 612.378.0543 | **Fax** 612.378.9024
Email info@NeedleDoctor.com | 6006 Excelsior Blvd., St. Louis Park, MN 55416

WORLD'S LARGEST SELECTION
OF TURNTABLES, CARTRIDGES, AND NEEDLES!

DEALERS' SHOWCASE

ADVERTISING

VooDoo CABLE™

THE ART OF HIGH RESOLUTION AUDIO

2015 the absolute sound Editors' Choice Awards

"Balanced and immersive big-buck performance for half the price of the Big Boys."
- Neil Gader, TAS #245

THE CABLE COMPANY

AVAILABLE AT
THE CABLE COMPANY
800.328.9973
Cable@TheCableCo.Com

"The Audio Desk Systeme record-cleaning machine which hails from Germany, is a revelation. It is revelatory not just for ease of use, but also for the multifarious improvements it renders to vinyl playback. This fully automatic ultrasonic cleaner, which employs a cavitation chamber in which LPs are bombarded with tiny air bubbles to loosen microscopic bits of dirt and grunge while being scrubbed by four rotary cleaning barrels, will leave just about any LP looking almost pristine. Both used and new vinyl benefit from being immersed in the Audio Desk. Bass lines become more audible, the noise floor appears to vanish, and even ticks and pops seem to be mostly effaced. It also seems to be extremely reliable. In short, it is a well-nigh indispensable accessory for any serious vinyl rig."

Audio Desk Systeme

a revelation

fully automatic

extremely reliable

indespensible

– The Absolute Sound, September, 2014

Golden Ear Awards 2013 Editors' Choice Awards 2012 Stereophile Product of the Year 2012 Editors' Choice

Ultra SYSTEMS

215-862-6570
ultra@ultrasystem.com

MANUFACTURERS' SHOWCASE

ADVERTISING

USEDCABLE.COM
UsedCable.com
USEDCABLE.COM
USEDCABLE.COM
UsedCable.com
UsedCable.com

The BEST way to buy used cables.

We buy cables. We sell cables. Free good advice.
One year warranty – 30 day exchange.

THE CABLE COMPANY

usedcable@usedcable.com | 800.328.9973
"A Cable Company Joint"

GET YOUR FIX

What's Your Passion?
Check Out the One-Stop Hub for Everything Enthusiast

TEN THE ENTHUSIAST NETWORK

Visit: tenappstore.com

STEREOPHILE ADVERTISER INDEX

Acoustic Sounds	12-13, 34, 44
Arcam Limited	21
Astell&Kern	66
Audience	57
Audio Plus Services	C4
Audioengine	80
AudioQuest	38
Auralic Limited	42
Axiss Distribution	84
Ayre Acoustics	60
Bel Canto	96
Cable Company	46-47
California Audio Technology	10
Channel D	117
Chord Electronics	32
Crystal Cable	C3
David Lewis Audio	123
Dynaudio	76
Elusive Disc	24-25, 118
Emotiva Audio	98
Estelon Loudspeakers	52
Get Better Sound	112
Golden Ear Technology	6
GTT AV	62
Hammertone	40-41
HDtracks	108
Janszen Electrostatic	26
Joseph Audio	8
JPS Labs	102
KEF	70
Kimber Kable	C2
Light Harmonic	72
Microshar	127
Montreal Audio Show	92
Music Direct	16-17, 110, 120
Needle Doctor	9, 50, 68, 82, 90, 104, 114, 116, 125
Oppo Digital	48
Pangea	36
Pass Laboratories	14
PrimaLuna	22
PS Audio	106
Radial Engineering	75, 89
Rogers High Fidelity	94
Rogue Audio	51
Siltech	4
Sumiko	86
Synergistic Research	100
T.H.E. Show	88
Thiel Loudspeakers	54
Ultra Systems	126
Upscale Audio	30
usedcable.com	126
VANA Ltd.	29
Vandersteen Audio	58
VooDoo Cable	126
VPI Industries	78
Wavelength Audio	43
Weinhart Design	103
Wharfedale	120
Wireworld	74
YG Acoustics	20

THE AD INDEX IS PROVIDED AS A COURTESY. THE PUBLISHER IS NOT LIABLE FOR INCORRECT INFORMATION OR EXCLUDED LISTINGS. ADVERTISERS SHOULD CONTACT THEIR SALES REPRESENTATIVE TO CORRECT OR UPDATE A LISTING.

CLASSIFIED

Please visit our showroom in Orange County, CA for an audition

psb SPEAKERS NAD MARTIN LOGAN DENON ROGUE AUDIO

JoLida B&K James
REL Tara Labs Sunfire
MIT Richard Gray's

www.DMC-ELECTRONICS.com (714)728-8645 Best Prices!

LOOKS WEIRD
FIXES WARPED RECORDS

www.vinylflat.com
469-426-8554

NewClear
"You've heard Goliath... now it's time to listen to David."

Designed and Manufactured in U.S.A
Stereophile Special 35% Off:
enter code: "1000Watts" at checkout
www.NewClearAudio.com

AI
Audio Intelligent Vinyl Solutions
Record Cleaning Products
Turntables and Analog Gear
Electronics Loudspeakers
Osage Audio Products, LLC
www.osageaudio.com
573-696-3551

AUDIOPHILE ESSENTIALS
Audiophile Essentials Editor CD package includes Recommended Component Collector's Edition Editor's Choice CD - only $15.

shop.stereophile.com
YOUR AUDIO AUTHORITY

AUDIOCLASSICS.COM – Buys / Sells / Trades/Repairs-AppraisesNew,Used&Vintage McIntosh, Marantz, Tannoy, JBL, Levinson and other High End audio equipment. ***3501 Vestal Road, Vestal, NY 13850 (800) 321-2834***

SALT LAKE CITY AREA – Aesthetix, AMG, Audio Research, Clearaudio, Dynavector, EAT, Esoteric, Exposure, Harbeth, Kimber, Marantz, Ortofon, Plinius, Primare, REL, Rogue, Shunyata, Vienna Acoustics, VPI, and more! ***(801) 647-8583, www.arisaudio.com.***

Auditorium 23 Cinema Hommage Loudspeaker

LONG ISLAND, NEW YORK – Audience, Audio Physic, Audio Desk, Avalon Acoustics, Berkeley Audio Design, Bryston, Cardas, Conrad-Johnson, Dali, Esoteric, Jeff Rowland, Hegel, Lyra, Oracle Audio, Ortofon, Purist Audio Design, Plinius, Siltech, Stax, Symposium Acoustics, Tannoy Prestige, Transparent Audio, VPI, VTL, Wireworld and many more. Large selection of fine preowned gear, quality trades welcome, analog guru on board. ***New York Sound & Vision (631) 321-8969*** *or visit* ***www.newyorksoundandvision.com***

AUDIO ART, est. 1976 – Edge-of-the-art audio components dedicated to serving music. Aesthetix, Audience, Avalon, Ayre, Benz, Cardas, Clearaudio, Hegel, Jeff Rowland, Martin Logan, Music Hall, Pro-Ject Series, Rega, Shunyata, SME, Sonus Faber, Spendor, Vandersteen. ***(804) 358-5300, AudioArtUSA@aol.com, Richmond, VA.***

DON BETTER AUDIO
Exclusive Mid-West Dealer for:
Auditorium 23, Acoustic Plan, EMT, Shindo, Leben, Line Magnetic, Lignolab, Well Tempered Labs, and much more.
Phone: (216) 375-1393
Email: info@donbetteraudio.com
www.DonBetterAudio.com

To Advertise:
Laura LoVecchio
(718) 745-5025
laura_lovecchio@sbcglobal.net

david michael audio

Representing The Worlds Finest Audio Products
Accuphase, Aesthetix, Air Tight, Aurender, Bel Canto, Bricasti, Constellation, Devialet, Focal, Harbeth, Hegel, JL Audio, Joseph Audio, Luxman, Magico, MIT, MSB, Naim, Nordost, Ortofon, Phasemation, Raidho, Rega, Rockport, Shelter, Shunyata, Soulution, Soundsmith, Stillpoints, VAC, Vienna, Vivid, VPI

586.244.8479
info@davidmichaelaudio.com
www.davidmichaelaudio.com

HCM AUDIO
The Audio Experts Since 1980
Visit our NEW, easy to use website!!
Authorized Dealers for:
Audioquest, API, Creek, Epos, Goldring, Music Hall, Nitty Gritty, Sonic Horizon and more.
NEW specials and closeouts available on Audioquest, Audio Magic, Music Metre, Nordost and more.
Audioquest's Silver Extreme solid silver interconnects available starting at $87.50 per pair
Audioquest AC12 a 12 gauge power cord starting at $99.00 /1 meter
Secure Online Ordering
HCM Audio
www.HCMAudio.com
hcmaudio@yahoo.com • 530-891-8326

2014 FINALIST
stereophile
Product of the Year
Audience Au24 SE
"...the Au24 SE's level of overall performance is a step or two beyond that of my other reference cables.."
Brian Damkroger - Dec 2013
stereophile
audience
audience-av.com (760) 471-0202 (800) 565-4390

"Upgrade Your Musical Experience"
Harbeth, Acoustic Signature, VAC, LFD, Wilson-Benesch, Penaudio, Primare, VTL, Unison, Wilson Audio, Naim, Sutherland, La Rosita, Dan D'Agostino, Stein Music, Tellurium Q, Rega, Shunyata, CH Precision, Stenheim, BAT, Opera Loudspeakers, Bricasti, Palmer, Metronome, Devialet
Trade Ins • Consignment • In Home Consultations
fidelis
MUSIC FOR LIFE
www.fidelisav.com • info@fidelisav.com
603-880-HIFI (4434)

AkitikA
You can build this great sounding stereo preamplifier

Listen to it just like it is, or customize it

Adjust it perfectly without leaving your favorite listening spot
For more information, go to www.akitika.com

High End Performance, Real World Prices.
audioArtcable
CONNECTING YOU WITH THE MUSIC

Recommended Component
STEREOPHILE 2014
Writer's Choice Award
POSITIVE FEEDBACK ONLINE
Exceptional Value Award
TONE AUDIO
Editor's Choice Award
STEREOTIMES.COM
www.audioartcable.com
619-255-6451

Sound Anchor
Hi- Performance Monitor Stands

Custom Sized
Single Post, 3 Post, 4 Post
Adjustable and Motorized Models
www.soundanchors.com
321 724 1237

AURAL ROBERT

BY ROBERT BAIRD

"I found the one mythical grail which is the Benedetti stuff so I figure my work here is done," MOSAIC FOUNDER MICHAEL CUSCUNA.

Winged Migration

The catalog of recordings left by Charlie Parker, aka Bird, is, like his life, one of the more tangled and byzantine in all of jazz. While most of his recordings were made for the Dial, Savoy, and Verve labels, issues, reissues, bootlegs, and stuff from God knows where recorded by God knows who, some of it obtained via opaque licensing agreements or outright piracy, continue to be released the world over on labels large (MGM, Atlantic, Elektra/Musician) and small (Pilz, Saga, Zim). The CD era brought a new wave of bad-sounding radio transcriptions and questionable live dates. Parker's discography now fills 21 pages on discogs.com. And then there's the fascinating pathology behind the recordings made by Dean Benedetti (released by Mosaic Records), who turned on his tape recorder only when Bird soloed.

Now, Dial's entire catalog of recordings, including the Bird tracks, has been remastered and reissued by Mosaic Records. *The Complete Dial Modern Jazz Sessions* is being released only on CD: no downloads, no vinyl. This release is itself a reissue—albeit squeezed onto 9 instead of 10 CDs—of a 1995 release by UK-based Spotlight Records, who own the Dial catalog.

While this set also contains fine recordings by Serge Chaloff, Errol Garner, Dexter Gordon, Howard McGhee, and others, the Dial catalog will always be most famous as the one period of Parker's career in which he was able to pick the sidemen, write the tunes, and have everything his way. But while the music itself is great, thanks in part to sidemen like Miles Davis, Max Roach, and Teddy Wilson, the sound quality of the original recordings—all of them cut onto disc in 1946 and 1947, before magnetic tape—is less than thrilling. Which begs the usual question: If the source material itself is seriously compromised, what can actually be done to improve the sound? Michael Cuscuna, Mosaic's founder and producer of *The Complete Dial Modern Jazz Sessions*, asked that question of mastering engineer Steve Marlowe, who'd been experimenting with Bit Density Processing.

"He sent me his 'improvements' on some of the Charlie Parker Dial masters, and they were pretty dramatic. It was like, 'Holy shit! This is unbelievable!' Unfortunately, when you are doing sonic rescue, you rescue everything, whether it's desired or not. So you would hear some annoying artifacts from the wow and flutter of the tape transfers, but other than that, what you were hearing, it sounded like the stuff was recorded in 1970. It was in perfect balance, and you could hear all the bass, all the drum kit, all the piano, plus the horns were in your face, Rudy Van Gelder style.

"There's nothing secretive about what Steve does. It's bit mapping. He goes bit by bit by bit and ferrets everything out. It's very tedious and very time consuming. We're paying him about an eighth of a cent an hour."

The source materials that Marlowe used were the 16 or 20-bit/44.1kHz digital transfers made in Japan in 1995, from as-clean-as-possible 78rpm shellac discs, by Toshiba EMI, under the direction of Hitoshi Namekata, Yoshita Aikawa, and Dial's founder, Ross Russell. Disc transfers were necessary because Dial—and its catalog—now resides where exactly?

"In heaven—or a landfill, take your choice," Cuscuna chortles. "There are no more metal parts. There are no more first-generation transfers, lacquers, nothing."

While improving the reproduction of 70-year-old shellac recordings is always an incremental game, there actually is audible improvement here over all previous digital versions that I've heard. After repeatedly listening to all nine discs (a very rewarding duty!), I settled on a take (Dial 1002) of one of Bird's best-known upbeat numbers, "Ornithology," for an A/B comparison with the same take as heard on its next-most-recent digital remastering, the three CD *Charlie Parker: The Complete Savoy & Dial Master Takes*

Charlie Parker at the February 19, 1947 session.

released on Savoy Records in 2002. This set was assembled, according to the liner notes, from "a variety of analog sources" and features "judicious use" of CEDAR and re-equalization. In the Mosaic version, the horns of Davis and Parker have a much more three-dimensional presence—a bigger, rounder sound—and the high-frequency response is greatly improved overall. The muffled, "sound in a can" shadow that accompanies most 78 transfers, while not entirely gone, has been greatly reduced. Roy Porter's cymbal work, for example, now has a crisp edge and a full-bodied *swoosh*. Overall, the instrumental muscle of these fabulous players emerges again. Unheard details suddenly appear and everything sounds more alive: not just a historical recording of musty legends from the distant past.

So this is the last word on the Dial Recordings right?

"After this came out, a Parker collector called me and said, 'You know, I've got about 17 alternate takes that are 78 test pressings that never made it to Spotlight.' None of them are Charlie Parker. So now we're talking about doing an addendum: a CD with these 17 tunes." ■

Music critic Robert Baird (robert.baird@sorc.com) welcomes a vibrant discourse on music and musicians.

PHOTO: COURTESY OF THE ROSS RUSSELL COLLECTION, HARRY RANSOM HUMANITIES RESEARCH CENTER, THE UNIVERSITY OF TEXAS AT AUSTIN

Crystal Cable

ARABESQUE

miNISSIMO

Natural Science

For more information about Crystal Cable's highend cables and the Arabesque loudspeaker range visit:
www.crystalcable.com **/CrystalCable.IAH**

Distributed in the USA by Audio Plus Services 800.663.9352 www.audioplusservices.com
Distributed in Canada by Plurison 866.271.5689 www.plurison.com

FOCAL®
THE SPIRIT OF SOUND

"The Focal Aria 936's measured performance would not be out of place in an expensive loudspeaker. Considering that it costs just $3,999/pair makes it an extraordinary value."
***John Atkinson** - November 2014*
stereophile

"The Focal responds with that astonishing detail and depth to the performance that has you engrossed in front of films instead of analysing them."
***9/10** - avforums*
avforums HIGHLY RECOMMENDED AWARD

www.focal.com

EXCLUSIVE
FLAX SANDWICH CONE

ARIA
936

AUDIO PLUS SERVICES
Distributed in USA by **Audio Plus Services**
www.audioplusservices.com - 800.663.9352

plurison
Distributed in Canada by **Plurison**
www.plurison.com - 866.271.5689